VENUS X1

User Manual

- Manual #: RGB-RD-UM-VENUS X1 E001

- Revision: V1.2

RGBlink

VENUS X1·User Manual

Thank you for choosing our products!

In order to allow you to learn how to use the video processor quickly, we bring you the detailed user's guide. You can read the introduction and directions before using the video processor, please read all the information we provide carefully to use our products correctly.

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Company Address

RGBlink   Xiamen RGBlink Science & Technology Co., Ltd.

Headquarter: S603~604 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen, Fujian Province, P.R.C

Shenzhen office: Floor 11, A1 Building, Baiwang R&D Building, Shahe West Road, Xili Town, Nanshan District, Shenzhen, Guangdong Province, P.R.C

Beijing office: No. 2702, Sino-Light Building Tower B, Wang-Jing East Road, Chaoyang District, Beijing, P.R.C

Shanghai office: East Building F2, No. 88 Qinjiang Road, Shanghai, P.R.C

- **Tel:** +86-592-5771197
- **Fax:** +86-592-5771202
- **Customer Hotline:** 4008-592-315
- **Websites:**
    - ~ http://www.rgblink.com
    - ~ http://www.rgblink.cn
- **E-mail:** sales@rgblink.com

Operators Safety Summary

The general safety information in this summary is for operating personnel.

Do Not Remove Covers or Panels

There are no user-serviceable parts within the unit. Removal of the top cover will expose dangerous voltages. To avoid personal injury, do not remove the top cover. Do not operate the unit without the cover installed.

Power Source

This product is intended to operate from a power source that will not apply more than 230 volts rms between the supply conductors or between both supply conductor and ground. A protective ground connection by way of grounding conductor in the power cord is essential for safe operation.

Grounding the Product

This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals. A protective-ground connection by way of the grounding conductor in the power cord is essential for safe operation.

Use the Proper Power Cord

Use only the power cord and connector specified for your product. Use only a power cord that is in good condition. Refer cord and connector changes to qualified service personnel.

Use the Proper Fuse

To avoid fire hazard, use only the fuse having identical type, voltage rating, and current rating characteristics. Refer fuse replacement to qualified service personnel.

Do Not Operate in Explosive Atmospheres

To avoid explosion, do not operate this product in an explosive atmosphere.

Terms in This Manual and Equipment Marking

WARNING

Highlights an operating procedure, practice, condition, statement, etc, which, if not strictly observed, could result in injury or death of personnel.

Note

Highlights an essential operating procedure, condition or statement.

CAUTION

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Change History

The table below lists the changes to the Video Processor User Manual.

Format	Time	ECO#	Description	Principal
V1.0	2015-05-18	0000#	Release	Vira
V1.1	2015-08-06	0001#	1. Update the front and back panel. 2. Update the menu tree. 3. Update the windows control program. 4. Update the common questions and solutions.	Vira
V1.2	2015-10-29	0002#	1. Update the front and back panel. 2. Update the menu tree. 3. Update the product picture. 4. Update the dimensions drawing 5. Update the specification. 6. Update "Optional Module Installation and Replacement Instruction". 7. Add "VENUS X1 Connect APP Control Operation".	Vira

CONTENT

1. Introduction

This chapter is designed to introduce you to the VENUS X1 User Manual. Areas to be covered are:

- Chapter Structure

- How to Use This Manual

- Terms and Definitions

- System Overview

- Application Questions

Chapter Structure

The following chapters provide instructions for all aspects of VENUS X1 operations.

Chapter 1   Introduction

Chapter 2   Hardware Orientation

Chapter 3   Hardware Installation

Chapter 4   Menu Orientation

Chapter 5   Communication Software Guideline

Chapter 6   System Setup and Operations

Chapter 7   Common Questions and Solutions

Appendix A   Specification

Appendix B   Contact Information

Appendix C   Software Upgrade

Appendix D   Optional Module Installation and Replacement

Instruction

Appendix E   VENUS X1 Connect APP Control Operation

How to Use This Manual

Following are important tips for streamlining your use of this User Manual in its electronic "PDF" form.

Navigating

Use Acrobat Reader's "bookmarks" to navigate to the desired location. All chapter files have the same bookmark structure for instant navigation to any section. Please note:

- Extensive hyperlinks are provided within the chapters.
- Use Acrobat's "**Go to Previous View**" and "**Return to next View**" buttons to trace your complete navigational path.

- Use the "**Previous Page**" and "**Next Page**" buttons to go to the previous or next page within a file.
- Use Acrobat's extensive search capabilities, such as the "**Find**" tool and "**Search Index**" tool to perform comprehensive searches as required.

Table of Contents and Index

Use the Table of Contents bookmarks to navigate a desired topic. Click any item to instantly jump to that section of the guide. You can also use the **Index** to jump to specific topics within a chapter. Each page number in the **Index** is a hyperlink.

General Operations

To ensure trouble-free operation, please follow all procedures as listed below:

- For detailed installation instructions, refer to chapter 3 "Hardware Installation" on page 39.
- For communication software control guide, refer to Chapter 5, "Communication Software Control Guide" on page 65.
- For system setup and operations, refer to Chapter 6, "System Setup and Operations" on page 94.

Should you have any questions regarding the installation or operation of VENUS X1, please consult with the factory. Refer to Appendix B, "Contact information" on page 135.

1. Introduction

Terms and Definitions

The following terms and definitions are used throughout this guide.

- **"Aspect ratio":** The relationship of the horizontal dimension to the vertical dimension of an image. In viewing screens, standard TV is 4:3, or 1.33:1; HDTV is 16:9, or 1.78:1. Sometimes the ":1" is implicit, making TV = 1.33 and HDTV = 1.78.
- **"AV":** Audio visual, or audio video.
- **"Baudrate"：** Named of J.M.E. Baudot, the inventor of the Baudot telegraph code. The number of the electrical oscillations per second, called baud rate. Related to, but not the same as, transfer rate in bits per second (bps).
- **"Blackburst":** The video waveform without the video elements. It includes the vertical sync, horizontal sync, and the chroma burst information. Blackburst is used to synchronize video equipment to align the video output. One signal is normally used to set up an entire video system or facility. Sometimes it is called House sync.
- **"BNC":** Bayonet Neill-Concelman. A cable connector used extensively in television and named for its inventors. A cylindrical bayonet connector that operates with a twist-locking motion. To make the connection, align the two curved grooves in the collar of the male connector with the two projections on the outside of the female collar, push, and twist. This allows the connector to lock into place without tools.
- **"Brightness":** Usually refers to the amount or intensity of video light produced on a screen without regard to color. Sometimes called "black level.
- "**CAT 5**": Category 5. Describes the network cabling standard that consists of four unshielded twisted pairs of copper wire terminated by RJ-45 connectors. CAT 5 cabling supports data rates up to 100 Mbps. CAT 5 is based on the EIA/TIA 568 Commercial Building Telecommunications Wiring Standard.
- **"Color bars":** A standard test pattern of several basic colors (white, yellow, cyan, green, magenta, red, blue, and black) as a reference for system alignment and testing. In NTSC video, the most commonly used color bars are the SMPTE standard color bars. In PAL video, the most commonly used color bars are eight full field bars. In the computer, the most commonly used color bars are two rows of reversed color bars.
- **"Color burst":** In color TV systems, a burst of subcarrier frequency located on the back porch of the composite video signal. This serves as a color synchronizing signal to establish a frequency and phase reference for the chroma signal. Color burst is 3.58 MHz for NTSC and

1. Introduction
Terms and Definitions

4.43 MHz for PAL.
- **"Color temperature":** The color quality, expressed in degrees Kelvin(K), of a light source. The higher the color temperature, the bluer the light. The lower the temperature, the redder the light. Benchmark color temperature for the A/V industry include 5000°K, 6500°K, and 9000°K.
- **"Contrast ratio":** The radio of the high light output level divided by the low light output level. In theory, the contrast radio of the television system should be at least 100:1, if not 300:1. In reality, there are several limitations. In the CRT, light from adjacent elements contaminate the area of each element. Room ambient light will contaminate the light emitted from the CRT. Well-controlled viewing conditions should yield a practical contrast ratio of 30:1 to 50:1.
- **"DVI":** Digital Visual Interface. The digital video connectivity standard that was developed by DDWG (Digital Display Work Group). This connection standard offers two different connectors: one with 24 pins that handles digital video signals only, and one with 29 pins that handles both digital and analog video.
- **"EDID":** Extended Display Identification Data – EDID is a data structure used to communicate video display information, including native resolution and vertical interval refresh rate requirements, to a source device. The source device will then output the optimal video format for the display based on the provided EDID data, ensuring proper video image quality. This communication takes place over the DDC – Display Data Channel.
- **"Ethernet":** A Local Area Network (LAN) standard officially known as IEEE 802.3. Ethernet and other LAN technologies are used for interconnecting computers, printers, workstations, terminals, servers, etc. within the same building or campus. Ethernet operates over twisted pair and over coaxial cable at speeds starting at 10Mbps. For LAN interconnectivity, Ethernet is physical link and data link protocol reflecting the two lowest layers of the OSI Reference Model.
- **"Frame":** In interlaced video, a frame is one complete image. A video frame is made up of two fields, or two sets of interlaced lines. In a film, a frame is one still image of a series that makes up a motion image.
- **"Gamma":** The light output of a CRT is not linear with respect to the voltage input. The difference between what you should have and what is actually output is known as gamma.
- **"HDMI" - High – Definition Multimedia Interface:** An interface used primarily in consumer electronics for the transmission of uncompressed high definition video, up to 8 channels of audio, and control signals, over a single cable. HDMI is the de facto standard for HDTV displays, Blu-ray Disc players, and other HDTV electronics.

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Terms and Definitions

Introduced in 2003, the HDMI specification has gone through several revisions.

- **"HDSDI":** The high-definition version of SDI specified in SMPTE-292M. This signal standard transmits audio and video with 10 bit depth and 4:2:2 color quantization over a single coaxial cable with a data rate of 1.485 Gbit/second. Multiple video resolutions exists including progressive 1280x720 and interlaced 1920x1080 resolution. Up to 32 audio signals are carried in the ancillary data.

- **"JPEG" (Joint photographic Expects Group):** Commonly used method of lossy compression for photographic images using a discreet cosine transfer function. The degree of compression can be adjusted, allowing a selectable tradeoff between storage size and image quality. JPEG typically achieves 10:1 compression with little perceptible loss in image quality. Produces blocking artifacts.

- **"MPEG":** Motion image Expect Group. A standard committee under the auspices of the International Standards Organization working on algorithm standards that allow digital compression, storage and transmission of moving image information such as motion video, CD-quality audio, and control data at CD-ROM bandwidth. The MPEG algorithm provides inter-frame compression of video images and can have an effective compression rate of 100:1 to 200:1.

- **"NTSC":** The color video standard used in North America and some other parts of the world created by the National Television Standards Committee in the 1950s. A color signal must be compatible with black-and-white TV sets. NTSC utilizes an interlaced video signals, 525 lines of resolution with a refresh rate of 60 fields per second (60 Hz). Each frame is comprised of two fields of 262.5 lines each, running at an effective rate of 30 frames per second.

- **"PAL":** Phase Alternate Line. A television standard in which the phase of the color carrier is alternated from line to line. It takes four full images (8 fields) for the color-to-horizontal phase relationship to return to the reference point. This alternation helps cancel out phase errors. For this reason, the hue control is not needed on a PAL TV set. PAL, in many transmission forms, is widely used in Western Europe, Australia, Africa, the Middle East, and Micronesia. PAL uses 625-line, 50-filed (25 fps) composite color transmission system.

- **"Operator":** Refers to the person who uses the system.

- **"PIP":** image-in-image. A small image within a larger image created by scaling down one of the images to make it smaller. Each image requires a separate video source such as a camera, VCR, or computer. Other forms of PIP displays include image-by-image (PBP) and image-with-image (PWP), which are commonly used with 16:9 aspect display devices. PBP and PWP image formats require a separate

1. Introduction
Terms and Definitions

scaler for each video window.

- **"Polarity":** The positive and negative orientation of a signal. Polarity usually refers to the direction or a level with respect to a reference (e.g. positive sync polarity means that sync occurs when the signal is going in the positive direction).

- **"RJ-45":** Registered Jack-45. A connector similar to a telephone connector that holds up to eight wires, used for connecting Ethernet devices.

- "**RS-232**": An Electronic Industries Association (EIA) serial digital interface standard specifying the characteristics of the communication path between two devices using either DB-9 or DB-25 connectors. This standard is used for relatively short-range communication and does not specify balanced control lines. RS-232 is a serial control standard with a set number of conductors, data rate, word length, and type of connector to be used. The standard specifies component connection standards with regard to the computer interface. It is also called RS-232-C, which is the third version of the RS-232 standard, and is functionally identical to the CCITT V.24 standard.

- **"Saturation":** Chroma, chroma gain. The intensity of the color, or the extent to which a given color in any image is free from white. The less white in a color, the truer the color or the greater its saturation. On a display device, the color control adjusts the saturation. Not to be confused with the brightness, saturation is the amount of pigment in a color, and not the intensity. Low saturation is like adding white to the color. For example, a low-saturated red looks pink.

- **"Scaling":** A conversion of a video or computer graphic signal from a starting resolution to a new resolution. Scaling from one resolution to another is typically done to optimize the signal for input to an image processor, transmission path or to improve its quality when presented on a particular display.

- **"SDI":** Serial Digital Interface. The standard based on a 270 Mbps transfer rate. This is a 10-bit, scrambled, polarity independent interface with common scrambling for both component ITU-R 601 and composite digital video and four channels of (embedded) digital audio.

- **"Seamless Switching":** A feature found on many video switchers. This feature causes the switcher to wait until the vertical interval to switch. This avoid a glitch (temporary scrambling) which normally is seen when switching between sources.

- **"SMPTE":** Society of Motion image and Television Engineers. A global organization, based in the United States, that sets standards for baseband visual communications. This includes film as well as video and television standards.

- **"TCP/IP":** Transmission Control Protocol/Internet Protocol. The

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Terms and Definitions

communication protocol of the Internet. Computers and devices with direct access to the Internet are provided with a copy of the TCP/IP program to allow them to send and receive information in an understandable form.

- **"USB":** Universal Serial Bus. USB was developed by seven PC and telecom industry leaders (Compaq, DEC, IBM, Intel, Microsoft, NEC, and Northern Telecom). The goal was easy plug-and-play expansion outside the box, requiring no additional circuit cards. Up to 127 external computer devices may be added through a USB hub, which may be conveniently located in a keyboard or monitor. USB devices can be attached or detached without removing computer power. The number of devices being designed for USB continues to grow, from keyboards, mice, and printers to scanners, digital cameras, and ZIP drives.

- **"VESA":** Video Electronics Standards Association. A nonprofit number organization dedicated to facilitating and promoting personal computer graphics through improved standards for the benefit of the end-user. www.vesa.org

- **"VGA":** Video Graphics Array. Introduced by IBM in 1987, VGA is an analog signal with TTL level separate horizontal and vertical sync. The video outputs to a 15-pin HD connector and has a horizontal scan frequency of 31.5 kHz and vertical frequency of 70 Hz (Mode 1, 2) and 60 Hz (Mode 3). The signal is non-interlaced in modes 1, 2, and 3 and interlaced when using the 8514/A card (35.5 kHz, 86 Hz) in mode 4. It has a pixel by line resolution of 640×480 with a color palette of 16 bits and 256,000 colors.

- **"YPbPr":** Used to describe the color space for progressive-scan (non-interlaced) component video.

1. Introduction

System Overview

VENUS X1 is a multiple outputs video processor that accepts a wide variety of video signals, including DVI, VGA, HDMI, CVBS, DP, SDI (SD/HD/3G compatible) and USB. VENUS X1 combines truly seamless, fade in fade out, glitch-free switching with advanced scaling technologies to meet the requirements of high quality, high resolution video presentations.

VENUS X1 also launches the latest, user defined image size and coordinate, dual image processing, multiple cascade mapping, different user configurations and controlling, key in and out and other advanced functions for high-end show.

VENUS X1 supports EDID editing for VGA, DVI, HDMI input ports and read EDID for output ports, support EDID modify by windows control program. PC modified EDID, users can edit the EDID of input port according to the resolution of outputs to achieve the optimal input resolution.

VENUS X1 also supports local front panel operation, remote widows based software control by RS232, USB, Ethernet, and WIFI control. In addition, VENUS X1 is based on replaceable input optional modules structure, with different modules, you can reach more possibility and application range.

1. Introduction

Application Question

Application Questions

RGBlink offers solutions to demanding technical problems. Any application questions, or required further information, please contact with our Customer Support Engineers. Refer to Appendix B for contact details.
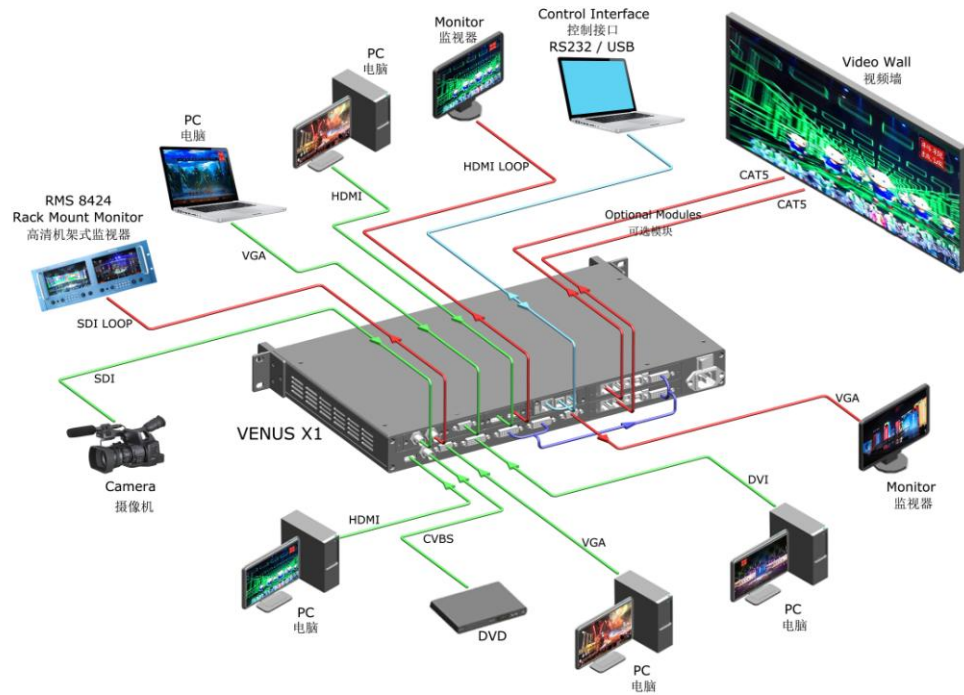
2. Hardware Orientation

In This Chapter

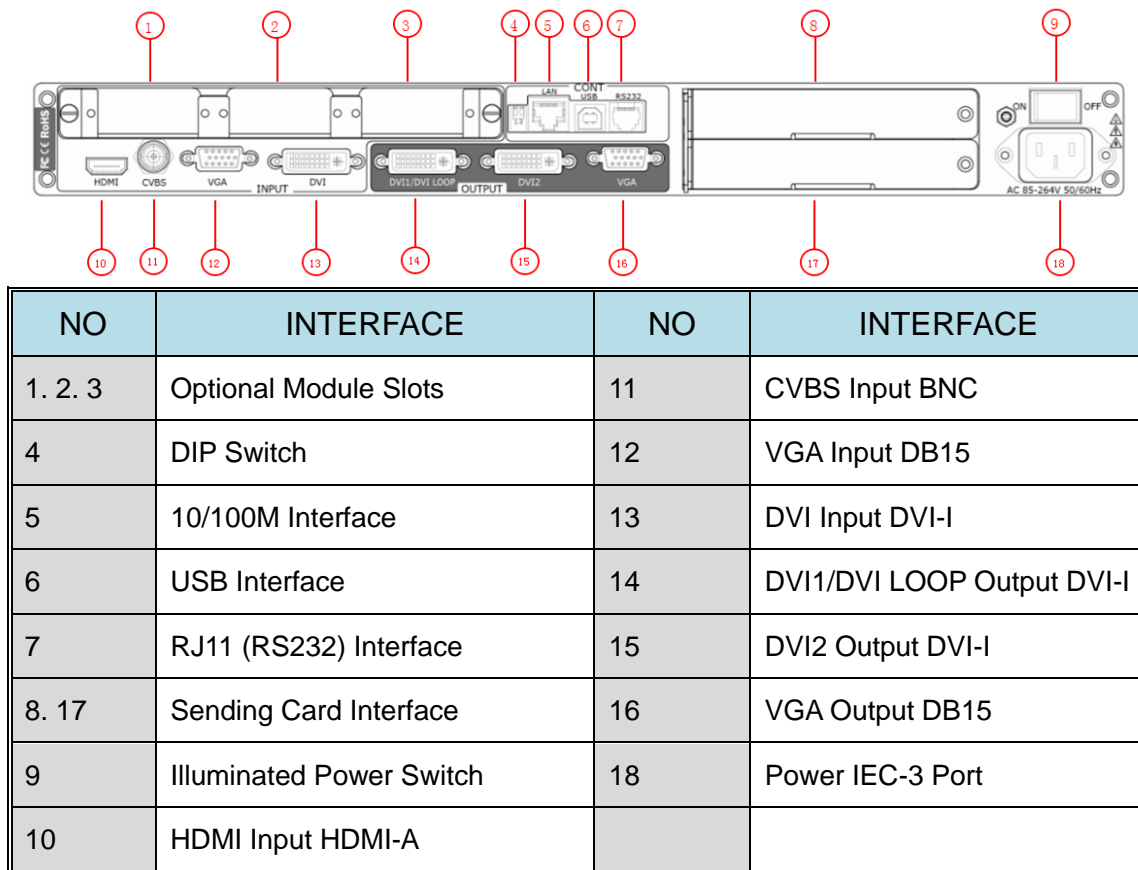This chapter provides detailed information about the VENUS X1 hardware. The following topics are discussed:

- VENUS X1 Back Panel

- VENUS X1 Front Panel

2. Hardware Orientation
VENUS X1 Back Panel

VENUS X1 Back Panel

The figure below illustrates the professional interface and control signals of

VENUS X1 back panel.

NO	INTERFACE	NO	INTERFACE
1. 2. 3	Optional Module Slots	11	CVBS Input BNC
4	DIP Switch	12	VGA Input DB15
5	10/100M Interface	13	DVI Input DVI-I
6	USB Interface	14	DVI1/DVI LOOP Output DVI-I
7	RJ11 (RS232) Interface	15	DVI2 Output DVI-I
8. 17	Sending Card Interface	16	VGA Output DB15
9	Illuminated Power Switch	18	Power IEC-3 Port
10	HDMI Input HDMI-A		

CONT Interface

4: DIP Switch

If the two DIP switches are upwards, the device is in normal work, and if

they are downwards, the device is in upgrade state. OLED module light is

off when the device is in upgrade state. Some of the button lights turn on,

and the device will not work.

5: 10/100M UDP Interface

Used to connect the windows control program or device upgrade.

6: USB Interface

Used to connect the windows control program or device upgrade.

2. Hardware Orientation
VENUS X1 Back Panel

7: RS232 Interface

Used to connect the windows control program or device upgrade.

INPUT Interface

It includes 1 HDMI input by HDMI-A interface, 1 CVBS inputs by BNC

interface, 1 VGA input by DB15 interface, and 1 DVI input by DVI-I

interface, which can be compatible with HDMI.

10: HDMI Input

HDMI input, input the image signal from computer.

11: CVBS Input

CVBS input, input standard video signal from players, cameras etc.,

supported resolution 480i and 576i via BNC. Supported standards include:

PAL, NTSC and SECAM.

12: VGA Input

VGA input, input the video signal from HD player and computer, etc.

Compatible with YPbPr via the DB15 interface.

13: DVI Input

DVI input, input the video signal from computer, DVI signal generator. If the

EDID is HDMI, the DVI can be compatible with HDMI 1.3.

(This connector can not support hot-plugging).

OUTPUT Interface

8.17: Sending Card Interface

Sending card module port. Compatible with Linsn, DBstar, Colorlight, Nova

sending card, etc. The power is supplied by video processor.

14: DVI1/DVI LOOP Output

2. Hardware Orientation

VENUS X1 Back Panel

DVI1 output, connect to the monitor or LED screen which has DVI interface

(This connector can not support hot-plugging).

DVI loop out, connect to the DVI input of the next VENUS X1 or the device

with DVI input.

System default DVI1 port. If do split via DVI LOOP port, it needs to select

"DVI LOOP" for <DVI1 OUTPUT> in menus.

15: DVI2 Output

DVI2 output, connect to the monitor or LED screen which has DVI interface

(This connector can not support hot-plugging).

16: VGA Output

VGA output, connect to monitor or projector which has VGA interface.

Optional Module

1. 2. 3: Optional Module Slots

Compatible with SDI, VGA, DVI, DL, DP, CVBS, USB, HL and audio

optional module. The audio optional module can only installed in Module 9.

Each SDI optional module includes 1 3G-SDI input and 1 SDI loop out.

Each VGA optional module includes 1 VGA input (DB15port). Each DVI

optional module includes 1 DVI-I (compatible with HDMI) input. Each DL

optional module includes 1 DVI-I (compatible with HDMI) input and 1 DVI

loop out. Each DP optional module includes 1 display port input. Each HL

optional module includes 1 HDMI input and 1 HDMI loop out. Each CVBS

optional module includes 1 CVBS input and 1 CVBS backup input. Each

USB optional includes 1 USB input and 1 USB backup input. Each audio

optional module includes 3 3.5mm analog audios and 1 balanced analog

audio.

3G-SDI Input (S Optional Module): Input video signal from HD camera

2. Hardware Orientation

VENUS X1 Back Panel

and radio processing equipment, connect SDI interface via 75 ohms

impedance BNC port.

SDI Loop Out (S Optional Module): Connect to the SDI input of the next

VENUS X1 or the device with SDI input.

VGA Input (V Optional Module): Input the video signal from HD player

and computer, etc. input signal via the DB15 interface.

DVI Input (D Optional Module): Input the video signal from computer, DVI

signal generator. Connect to the same DVI interface on VENUS X1.

(This connector does not support hot-plugging).

DVI Input (DL Optional Module): Input the video signal from computer,

DVI signal generator. Connect to the same DVI interface on VENUS X1.

DVI Loop Out (DL Optional Module): Connect to the DVI input of the next

VENUS X1 or the device with DVI input.

DP Input (DP Optional Module): Input the video signal from HD player,

computer.

HDMI Input (HL Optional Module): Input the image signal from computer.

HDMI Loop Out (HL Optional Module): Connect to the HDMI input of the

next level VENUS X1 or the device with HDMI input.

CVBS Input (C Optional Module): Input standard video signal from

players, cameras etc.

USB Input (U Optional Module): Can access the USB device or mobile

hard disk with USB storage function. Support general image and video

formats.

Analog Audio Input (Audio Optional Module): Input the video signals

from the DVD player, hardware player and digital box.

Analog Audio Output (Audio Optional Module): Connect to the audio

devices such as speaker.

2. Hardware Orientation
VENUS X1 Back Panel

Illuminated Power Switch and Power

9. 18: Power Interface and Illuminated Power Switch

AC 85-264V 50/60Hz IEC-3 Power Interface.

For more details about the input/output numbers, supported resolutions, signal level, format standard, etc, please refer to Specification part.
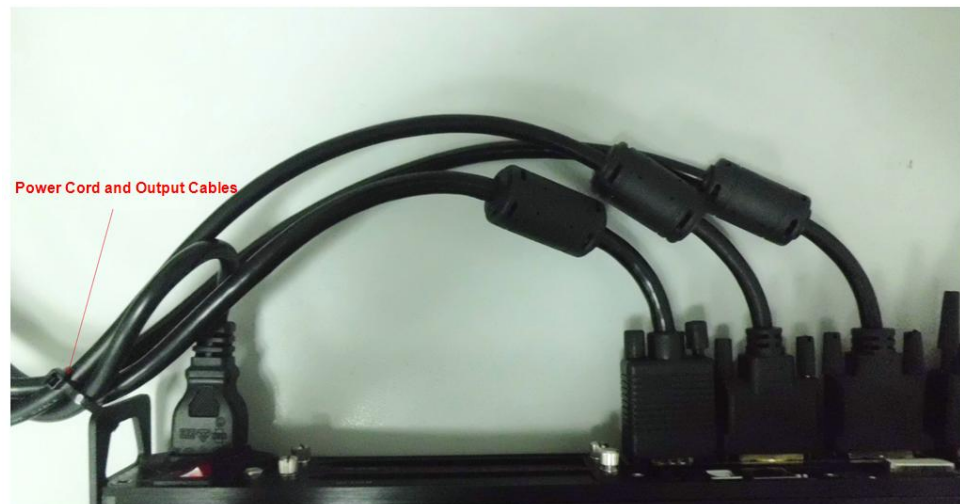
2. Hardware Orientation

VENUS X1 Back Panel

Interface Protection Block

VENUS X1 equips the interface protection blocks on both sides of the back panel, the purpose are as follows:

1. Protect the interfaces, it avoids the interface damage that may caused if the back panel hits the ground.

2. Tie the input and output cables, to avoid the cables loose by the external touch, which may cause signal interrupt. The tie method shown as follows:

2. Hardware Orientation

VENUS X1 Front Panel

VENUS X1 Front Panel

Plug in the power cord and push power to ON position. OLED module on the front panel will show RGBlink and go into its self verification before it load last setting config and send processed image to the target monitor. System default DVI input. User can operate VENUS X1 through the menus on OLED module.

VENUS X1 front panel as shown in figure:
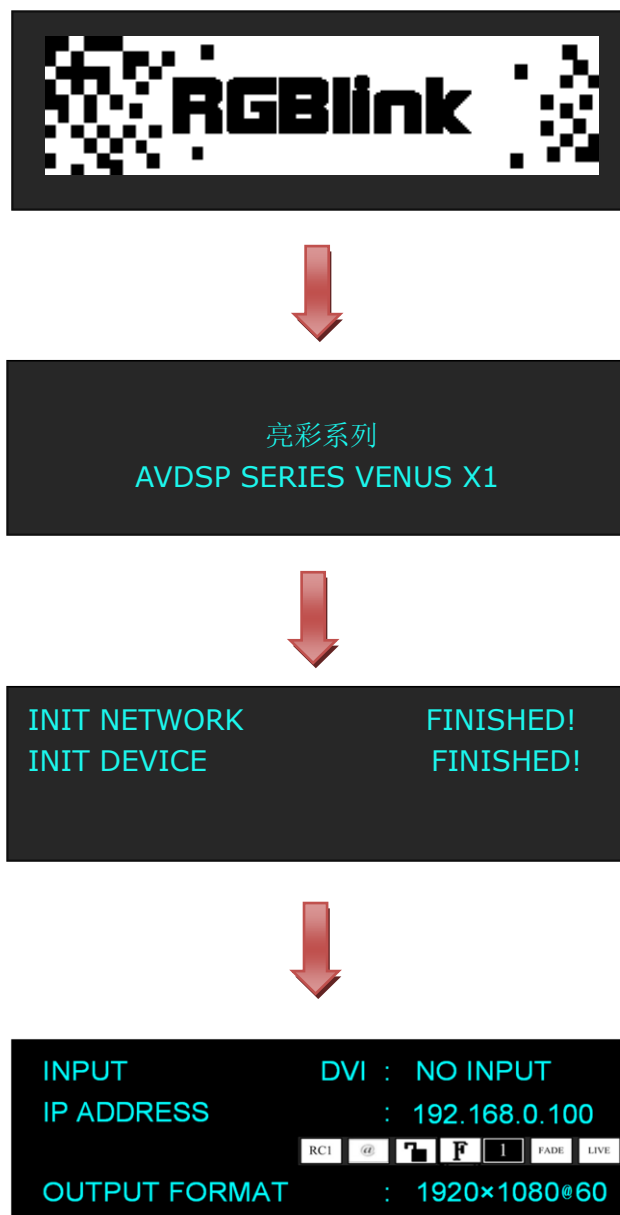
2. Hardware Orientation

VENUS X1 Front Panel

Note:

INPUT DVI: NO INPUT--System default DVI signal, there is no input or the

DVI signal is invalid.

IP ADDRESS--The IP address is 192.168.0.100.

RC1 : Recall Save 1.

@ : Enable the network function.

: Unlock state.

F : Full size display.

1 : Single image.

FADE : Fade in fade out.

LIVE : Live video.

OUTPUT FORMAT: 1920×1080@60--The current output format is
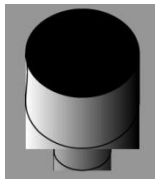
1920×1080@60.

2. Hardware Orientation

VENUS X1 Front Panel

VENUS X1 front panel as following:
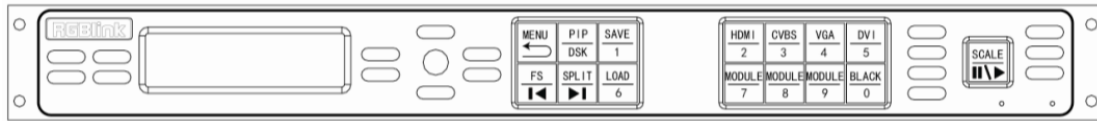
OLED Panel

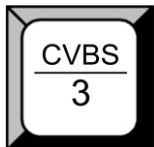Used to show button menu and menus for interactive communication.

Menu Button

Used to adjust menu on OLED and for information interaction. Push the rotary button to confirm current options.
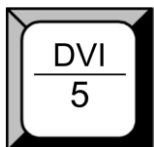
Signal Buttons
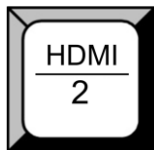
HDMI input selection button, push the button, its LED light turns on, output will be switched to this channel.
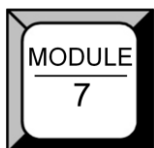
CVBS input selection button, push the button, its LED light turns on, output will be switched to this channel.

VGA and YPbPr input selection button, push the button, its LED light turns on, output will be switched to this channel.
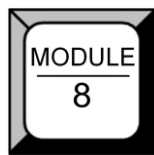
DVI input selection button, push the button, its LED light turns on, output will be switched to this channel.
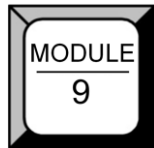
Optional module input selection button 7, push the button, its LED light turns on, output will be switched to this channel. Support signals include: SDI, VGA, DVI, DP, CVBS, USB and HDMI.
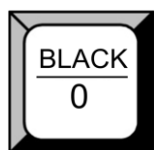
2. Hardware Orientation

VENUS X1 Front Panel

MODULE 8

Optional module input selection button 8, push the button, its LED light turns on, output will be switched to this channel. Support signals include: SDI, VGA, DVI, DP, CVBS, USB and HDMI.

MODULE 9

Optional module input selection button 9, push the button, its LED light turns on, output will be switched to this channel. Support signals include: SDI, VGA, DVI, DP, CVBS, USB, HDMI and audio.

BLACK 0

Black button, push the button, its LED light turns on, the output will be switched to black, push the button again, its LED light is off, and output the video image.

Besides BLACK, user can define this button as FREEZE, TEST PATTERN and BRIGHT.

If define this button as FREEZE, push the button, its LED light turns on, and freeze the image. Push the button again, its LED light is off, and output the video image.

If define this button as TEST PATTERN, push the button, its LED light turns on, the output will be switched to test pattern. Push the button again, its LED light is off, and output the video image.

If define this button as BRIGHT, push the button, its LED light turns on, user can adjust the brightness, contrast, saturation, sharpness, color red, color green, color blue and gamma. If image quality distorts by improper operation, it can be recover by reset.

For more details, please refer to: How to User Define the BLACK Key.
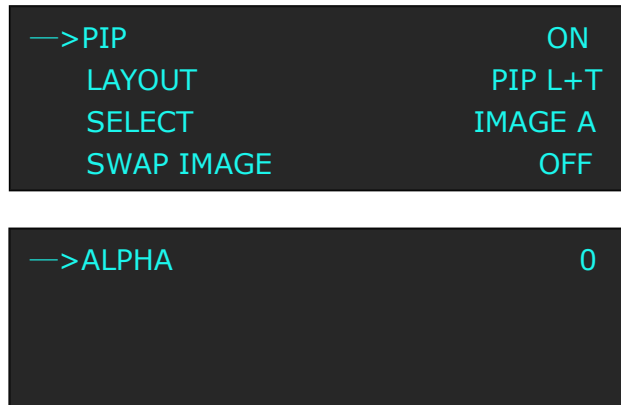
Function

PIP DSK
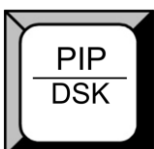
PIP and DSK function reuse button: Push the button, its LED light turns on, and PIP function is open. Push the button again, its LED light turns off, close

2. Hardware Orientation

VENUS X1 Front Panel

the PIP function, and change to the single image. OLED shows as follows:

```
—>PIP                        ON
   LAYOUT                 PIP L+T
   SELECT                 IMAGE A
   SWAP IMAGE               OFF
```

```
—>ALPHA                       0
```

For details, please refer to PIP function and How to Set up the PIP.
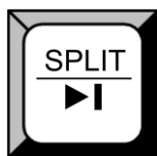
> **Note**
>
> | VENUS X1 V1.2 can not support DSK function button. |
> | --- |

FS ◄| Screen parameters setting button. Push the button, its LED light turns on, user can choose full size or screen size, and set the size and position of the screen.

When connect USB signal, it reused the move previous button, push the button to play the previous USB video file.

SPLIT ►| Split function button: push the button, its LED light turns on, OLED menu shows as follows:

```
—>FIXED SPLIT                  >>
   NORMAL SPLIT                >>
```

Turn the knob, and choose the split mode, for example, choose <FIXED SPLIT>, push the knob to confirm. Turn the knob, and set the <SPLIT> as "ON", push the knob to confirm. The [SPLIT] button light turns on, and enable the split function. OLED menu shows as follows:

2. Hardware Orientation

VENUS X1 Front Panel

```
—>SPLIT                        ON
   HORIZONTAL SPLIT            1
   VERTICAL SPLIT             1
   SPLIT INDEX                1
```

```
—>H SIZE                     1920
   V SIZE                    1080
   ADVANCE                    >>
```

For details, please refer to SPLIT Function and How to Set up the SPLIT.

Note

> The split function is only available for DVI port
> and the HDMI LOOP port of EXT 9, it needs a
> signal distributor if split with DVI port.

Note

> SPLIT reuse function: PIP mode, SPLIT button is
> select image A or image B.

When connect USB signal, it reused the move next button, push the button
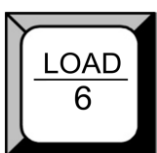
to play the next USB video file.

Save button: Push the button to enter **SAVE** mode, turn the knob or push the

number button which light up to save.

VENUS X1 supports 36 saving modes, and the button 1, 2, 3, 4, 5, 6, 7, 8, 9,

0 means SAVE1~10.

The OLED menu will show finish after finish saving.

For details, please refer to SAVE Function and How to Save the Parameter.

LOAD button: Push it to enter **LOAD** mode, turn the knob or push the
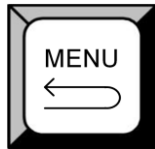
number button which light up to load the saved parameters.

VENUS X1 supports 36 loading modes, and the button 1, 2, 3, 4, 5, 6, 7, 8, 9,

0 means LOAD user mode 1~10.

2. Hardware Orientation

VENUS X1 Front Panel

The OLED menu will show finish after finish loading.

For details, please refer to LOAD Function and How to Load the Saved Parameter.

Advanced menu button: Push the button to enter the menu items. Turn the knob to select the relevant submenu. For details, please refer to MENU in menu orientation.

ESC reuse function button: Push the **MENU** to exit the menu.

Effect switch function: Push the **MENU** button two times to enter the effect switch function menu.

For details please refer to: Special Effect Switching.

Push the **MENU** for 3 seconds will lock the panel, and push **MENU** for 5 seconds to unlock.

Push the **MENU** and **SCALE** button for 3 seconds can switch the language.

Scale function button: For image size adjustment, push the button to enter the scale menu. Turn the knob to select the relevant submenus. For details, please refer to SCALE FUNCTION in menu orientation and How to Set the Size and Position of the Single Image.

When connect the USB signal, push the button, the video or image will stop or play.

Besides SCALE, user can define this button as TAKE.

If define this button as TAKE, push the button, its LED light turns on, choose the signal that will switch, and push the **SCALE** (**TAKE**) button, the signal will be switched to the LED screen.

User can also long push the [SCALE] button to switch it to TAKE function.

For more details, please refer to: How to User Define the SCALE Key.

When connect USB signal, it reused the stop and play button, push the button to stop or play the USB video file.

3. Hardware Installation

In This Chapter

This chapter provides comprehensive installation instruction for VENUS X1 hardware:

Following is the mechanic info of VENUS X1 for your reference.

Weight:

Net Weight   2.7 Kg
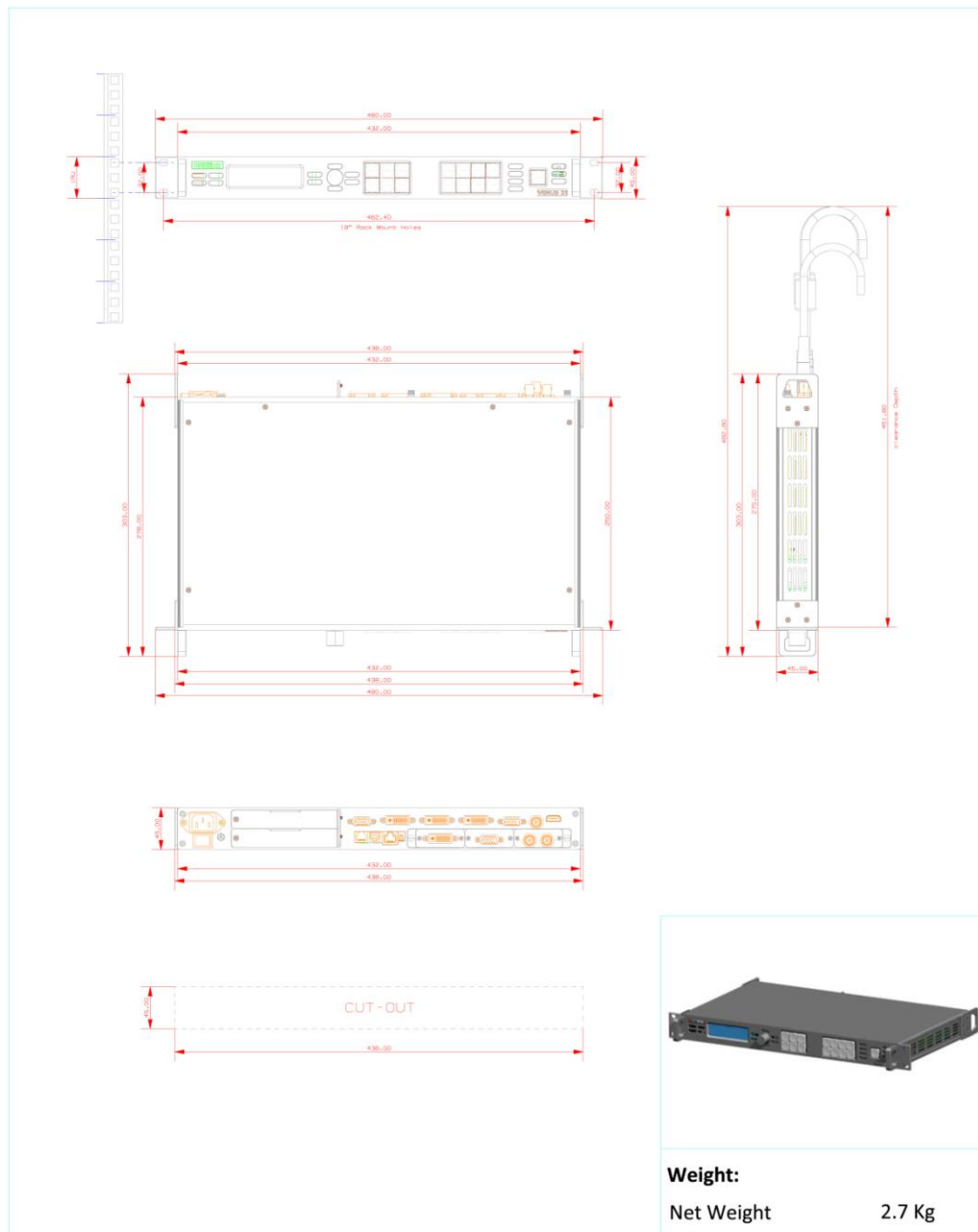
Safety Precautions

For all VENUS X1 processor installation procedures, please observe the following important safety and handling rules to avoid damage to yourself and the equipment.

● To protect users from electric shock, ensure that the chassis connects to earth via the ground wire provided in the AC power Cord.

● The AC Socket-outlet should be installed near the equipment and be easily accessible.

Unpacking and Inspection

Before opening VENUS X1 processor shipping box, inspect it for damage. If you find any damage, notify the shipping carrier immediately for all claims adjustments. As you open the box, compare its contents against the packing slip. If you find any shortages, contact your sales representative.

Once you have removed all the components from their packaging and checked that all the listed components are present, visually inspect the system to ensure there was no damage during shipping. If there is damage, notify the shipping carrier immediately for all claims adjustments.

Site Preparation

The environment in which you install your VENUS X1 should be clean, properly lit, free from static, and have adequate power, ventilation, and space for all components.

4. Menu Orientation

In This Chapter

This chapter describes all VENUS X1 processor menus, including how they are accessed, the functions that are available, and descriptions of each menu tree (in block diagram format).

The following topics are discussed:

- **MENU**
  - ➤ INPUT
  - ➤ OUTPUT
  - ➤ PICTURE
  - ➤ PIP
  - ➤ SPLIT
  - ➤ TRANSITION
  - ➤ SCALE
  - ➤ SAVE SETUP
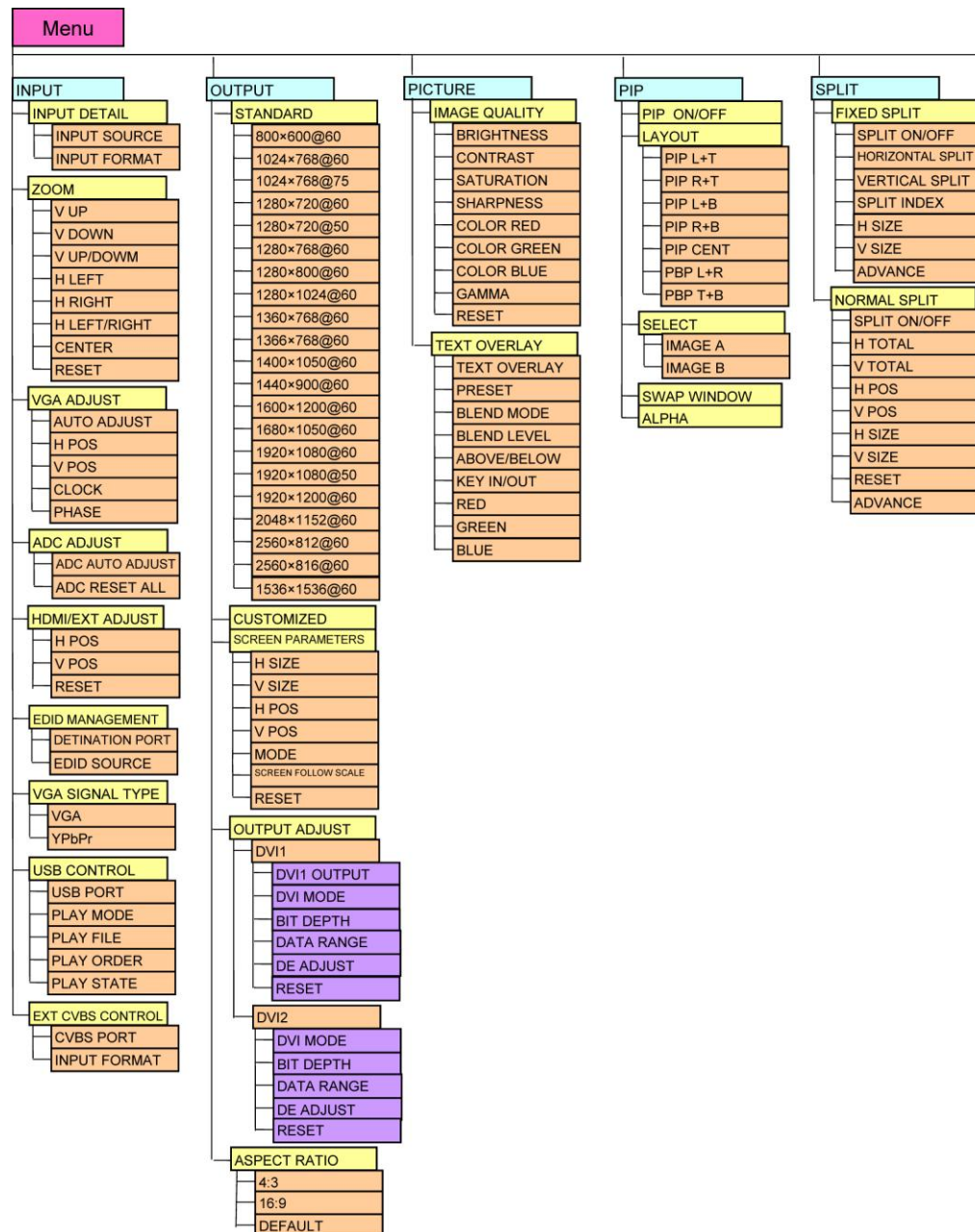 - ➤ SYSTEM
  - ➤ LANGUAGE
  - ➤ FACTORY RESET
- **QUICK MENU**
  - ➤ SPECIAL EFFECTS SWITCHING
  - ➤ SAVE FUNCTION
  - ➤ LOAD FUNCTION
  - ➤ PIP FUNCTION
  - ➤ SPLIT FUNCTION
  - ➤ SCALE FUNCTION

4. Menu Orientation
MENU

MENU

Push the **MENU** to menu items, menu as shown: Turn the knob to select
menu items. -> before the menu means it's in selected state. Push the knob
to enter corresponding setting or view the menu.

Menu

INPUT
- INPUT DETAIL
  - INPUT SOURCE
  - INPUT FORMAT
- ZOOM
  - V UP
  - V DOWN
  - V UP/DOWM
  - H LEFT
  - H RIGHT
  - H LEFT/RIGHT
  - CENTER
  - RESET
- VGA ADJUST
  - AUTO ADJUST
  - H POS
  - V POS
  - CLOCK
  - PHASE
- ADC ADJUST
  - ADC AUTO ADJUST
  - ADC RESET ALL
- HDMI/EXT ADJUST
  - H POS
  - V POS
  - RESET
- EDID MANAGEMENT
  - DETINATION PORT
  - EDID SOURCE
- VGA SIGNAL TYPE
  - VGA
  - YPbPr
- USB CONTROL
  - USB PORT
  - PLAY MODE
  - PLAY FILE
  - PLAY ORDER
  - PLAY STATE
- EXT CVBS CONTROL
  - CVBS PORT
  - INPUT FORMAT

OUTPUT
- STANDARD
  - 800×600@60
  - 1024×768@60
  - 1024×768@75
  - 1280×720@60
  - 1280×720@50
  - 1280×768@60
  - 1280×800@60
  - 1280×1024@60
  - 1360×768@60
  - 1366×768@60
  - 1400×1050@60
  - 1440×900@60
  - 1600×1200@60
  - 1680×1050@60
  - 1920×1080@60
  - 1920×1080@50
  - 1920×1200@60
  - 2048×1152@60
  - 2560×812@60
  - 2560×816@60
  - 1536×1536@60
- CUSTOMIZED
  - SCREEN PARAMETERS
    - H SIZE
    - V SIZE
    - H POS
    - V POS
    - MODE
    - SCREEN FOLLOW SCALE
    - RESET
- OUTPUT ADJUST
  - DVI1
    - DVI1 OUTPUT
    - DVI MODE
    - BIT DEPTH
    - DATA RANGE
    - DE ADJUST
    - RESET
  - DVI2
    - DVI MODE
    - BIT DEPTH
    - DATA RANGE
    - DE ADJUST
    - RESET
- ASPECT RATIO
  - 4:3
  - 16:9
  - DEFAULT

PICTURE
- IMAGE QUALITY
  - BRIGHTNESS
  - CONTRAST
  - SATURATION
  - SHARPNESS
  - COLOR RED
  - COLOR GREEN
  - COLOR BLUE
  - GAMMA
  - RESET
- TEXT OVERLAY
  - TEXT OVERLAY
  - PRESET
  - BLEND MODE
  - BLEND LEVEL
  - ABOVE/BELOW
  - KEY IN/OUT
  - RED
  - GREEN
  - BLUE

PIP
- PIP ON/OFF
- LAYOUT
  - PIP L+T
  - PIP R+T
  - PIP L+B
  - PIP R+B
  - PIP CENT
  - PBP L+R
  - PBP T+B
- SELECT
  - IMAGE A
  - IMAGE B
- SWAP WINDOW
- ALPHA

SPLIT
- FIXED SPLIT
  - SPLIT ON/OFF
  - HORIZONTAL SPLIT
  - VERTICAL SPLIT
  - SPLIT INDEX
  - H SIZE
  - V SIZE
  - ADVANCE
- NORMAL SPLIT
  - SPLIT ON/OFF
  - H TOTAL
  - V TOTAL
  - H POS
  - V POS
  - H SIZE
  - V SIZE
  - RESET
  - ADVANCE

4. Menu Orientation
MENU

TRANSITION
- DEINTERLACE
- IMAGE ENHANCE
- MODE
- FADE TIME
- ALPHA

SCALE
- H SIZE
- V SIZE
- H/V SIZE
- H POS
- V POS
- RESET

SAVE SETUP
- SAVE TO
- RECALL SAVE
- DELAY CALL
- REAL-TIME SAVE

SYSTEM
- SN
- VERSION
  - SOFTWARE VERSION
  - HARDWARE VERSION
- TECH SUPPORT
  - SALES
  - CUSTOMER SERVICE
  - EMAIL
  - WEBSITE
  - TEL
- DATE&TIME
  - DATE
  - TIME
  - CHANGE DATE
  - CHANGE TIME
  - CURRENT TIME
  - LAST TIME
  - TOTAL TIME
  - BOOT TIMES
- ETHERNET
  - NETWORK
  - DHCP
  - IP ADDRESS
  - SUBNET MASK
  - GATEWAY
- LOCK FRONT PANEL
- LICENCE SETUP
- HOT BACKUP
  - HOT BACKUP
  - BACKUP_1
  - BACKUP_2
  - BACKUP_3
  - BACKUP_4
  - BACKUP_5
- DEVICE STATUS
  - VIDEO STATUS
  - MB STATUS
  - EXT STATUS
- USER DEFINES BUTTON
  - BLACK KEY
  - SCALE KEY
- OLED LUMINANCE
- FAN CONTROL
  - AUTO SPEED
  - CURRENT SPEED
  - CURRENT TEMPERATURE

LANGUAGE/语言
- ENGLISH
- 中文

FACTORY RESET
- FACTORY RESET
- RESET IP RESET

INPUT

Push the [MENU] button, OLED display menu, push the knob to select <INPUT>, show menus as follows:

INPUT DETAIL: Show the current input source and input format.

ZOOM: It can adjust the image zoom size and positions, settings including as follows:

V UP--image to up zoom.

V DOWN--image to down zoom.

4. Menu Orientation

MENU

V UP/DOWN--image to up and down zoom.

H LEFT--image to left zoom.

H RIGHT--image to right zoom.

H LIFT/RIGHT--image to left and right zoom.

CENTER--image from center to the edges zoom.

RESET: If image quality distorts by improper operation, it can be recover by

reset.

For details, please refer to the instructions in the manual: How to Zoom the

Image.

VGA ADJUST: Adjust VGA input signal, sub menu as follows:

AUTO ADJUST: Auto adjust VGA input signal H POS, V POS, CLOCK,

PHASE, auto adjust to display in full screen image.

Note

Comments customers to use this operation in adjusting the VGA input shiftment.

H POS: Image horizontal position.

V POS: Image vertical position.

CLOCK: Input signal clock.

PHASE: Input image phase.

Note

Only comments to professional operator.

ADC AUTO ADJUST: Mainly for brightness auto adjusting.

HDMI/EXT ADJUST: When HDMI or optional module input signal image

shift, please adjust image's H POS and V POS to display in full screen

image.

Sub menu as follows:

H POS: Image horizontal position.

V POS: Image vertical position.

4. Menu Orientation
MENU

RESET: If image quality distorts by improper operation, it can be recover by reset.

EDID MANAGE: Choose the detination port and source file, VENUS X1 supports the EDID manage ports and types are as follows:

Supported EDID Manage Port	Supported EDID Manage Type
VGA	RGBVGA, OUT_VGA, FOLLOW, CUSTOM
DVI	RGBDVI, RGBHDMI, OUT_DVI1, OUT_DVI2, FOLLOW, CUSTOM
EXT_HDMI	RGBDVI, RGBHDMI, OUT_DVI1, OUT_DVI2, FOLLOW, CUSTOM
EXT_VGA	RGBVGA, OUT_VGA, FOLLOW, CUSTOM
EXT_DVI	RGBDVI, RGBHDMI, OUT_DVI1, OUT_DVI2, FOLLOW, CUSTOM

VGA SIGNAL TYPE: Program VGA button is VGA signal or YPbPr signal.

USB CONTROL: Sub menu as follows:

USB PORT: Can choose PORT A or PORT B.

PLAY MODE: Can choose photo or movie.

PLAY FILE: Choose the file that will play.

PLAY ORDER: Can choose REPEAT ALL, SHUFFLE, ORDER, SINGLE CYCLE, SINGLE TRACK, PLAY LIST.

PLAY STATE: Can choose PLAY or PAUSE.

EXT CVBS CONTROL: Sub menu as follows:

CVBS PORT: Can choose PORT A or PORT B.

INPUT FORMAT: Show the input format of CVBS.

OUTPUT

Push the [MENU] button to go into the menu items, and turn the knob to select <OUTPUT>, show menus as follows:

4. Menu Orientation
MENU

STANDARD: Push the knob to select left or right menu item, turn the knob to enter corresponding setting or view the menu. Users can choose different output formats by turning the knob, this option includes 22 common standard output resolutions, shown as follows:

800×600@60, 1024×768@60, 1024×768@75, 1280×720@50, 1280×720@60, 1280×768@60, 1280×800@60, 1280×1024@60, 1360×768@60, 1366×768@60, 1400×1050@60, 1440×900@60, 1536×1536@60, 1600×1200@60, 1680×1050@60, 1920×1080@50, 1920×1080@60, 1920×1200@60, 2048×1152@60, 2560×812@60, 2560×816@60, 1536×1536@60.

CUSTOMIZED: The special display project or LED screen application would like to require special resolution settings to meet the requirement. Details please refer to the instructions in the manual: How to Choose and Custom the Output Resolution.

SCREEN PARAMETERS: Sub menu as follows:

H SIZE: Width setting.

V SIZE: Height setting.

H POS: Horizontal phase setting.

V POS: Vertical phase setting.

MODE: Can choose SCREEN SIZE or FULL SIZE.

SCREEN FOLLOW SCALE: User can enable or disable this function. When choose "ON", the size of the screen will change according to scale setting.

RESET: If image quality distorts by improper operation, it can be recover by factory reset.

For details, please refer to the instructions in the manual: How to Realize the Screen Size Switching.

OUTPUT ADJUST: Output adjust menus, sub menu as follows:

DVI1, setting as following:

4. Menu Orientation

DVI1 OUTPUT: Can choose OUTPUT or DVI-LOOP. System default DVI1

port. If do split via DVI LOOP port, it needs to select "DVI LOOP".

DVI MODE: Can set the protocol as HDMI or DVI, default is DVI output,

HDMI signal output will enable when HDMI option checked.

BIT DEPTH: Can set the image bit depth. DVI default 8 bit, user don't need

to set it. HDMI default 10 bit, and can choose 8 bit or 12 bit.

DATE RANGE: DVI1 output range, can set as RGB (graphic mode or

YCbCr (video mode), RGB output scale range is 0~255, YCbCr range is

16~235.

DE ADJUST: DE adjust, sub menu as following:

DE ON/OFF: Can choose to open or close, when choose open, it can be

adjusted to DE, as follows:

H SIZE: Width setting.

V SIZE: Height setting.

H POS: Horizontal phase setting.

V POS: Vertical phase setting.

When the signal source of the screen appear black side, can use this

function to shift the black out of the screen.

RESET: If image quality distorts by improper operation, it can be recover by

reset.

DVI2, the settings include DVI MODE, BIT DEPTH, DATA RANGE, DE

ADJUST and RESET, the settings are same with DVI1.

ASPECT RATIO: Aspect ratio setting, user can choose 4:3, 16:9 and

DEFAULT.

PICTURE

Push the [MENU] button to go into the menu items, turn the knob button to

select <PICTURE>, show menus as follows:

4. Menu Orientation
MENU

IMAGE QUALITY: Image quality setting, the sub-menu as following:

BRIGHTNESS: It can change the image brightness via BRIGHTNESS setting, the adjustment range is 0~100.

CONTRAST: It can change the image contrast via CONTRAST setting, the adjustment range is 0~100.

SATURATION: It can change the image saturation via SATURATION setting, the adjustment range is 0~100.

SHARPNESS: It can change the image sharpness via SHARPNESS setting, the adjustment range is 0~100.

COLOR RED: It can change the image color red via this setting, the adjustment range is 0~100.

COLOR GREEN: It can change the image color green via this setting, the adjustment range is 0~100.

COLOR BLUE: It can change the image color blue via this setting, the adjustment range is 0~100.

GAMMA: Gamma setting, push it to adjust the image gamma value; Gamma values include: -1.2, -1.4, -1.6, 1, 1.2, 1.4, 1.6, and sRGB.

RESET: If image quality distorts by improper operation, it can be recover by reset.

Note

Users can set according to their actual situation, this function mainly suitable for these professional operator who knows how to set the image quality correctly. Others are not comments to do these operations. If image distorted by improper operation, it can be initialized operated to recover by factory reset.

TEXT OVERLAY: Text overlay function, settings are as follows:

TEXT OVERLAY: Can select "ON" or "OFF", system default off.

PRESET: Can preset value of the following functions, and total 13 modes:

4. Menu Orientation
MENU

User: User mode.

WhOnBk1: White On Black 1.

WhOnBk2: White On Black 2.

BkOnWh1: Black On White 1.

BkOnWh2: Black On White 2.

GrnOnBk1: Green On Black 1.

GrnOnBk2: Green On Black 2.

GrnOnWh1: Green On White 1.

GrnOnWh2: Green On White 2.

RedOnBk1: Red On Black 1.

RedOnBk2: Red On Black 2.

RedOnWh1: Red On White 1.

RedOnWh2: Red On White 2.

BLEND MODE: Blend mode, with two modes, "Mode 1" and " Mode 2".

Mode 1: Graphic content locate at the top and is non-transparent, background transparency is controlled by double-image transparency;

Mode 2: Graphic content is controlled by double-image transparency, the background is completely transparent.

BLEND LEVEL: Can set the image display transparency, the regulating range is among 0 to 16.

ABOVE/BELOW:

ABOVE: In image 2, if the pixel value is higher than the setting value, then the image is the graphic content pixel, otherwise, it is the graphic background pixel. It should combined with "AND/OR" conditions when judging.

BELOW: In image 2, if the pixel value is lower than the setting value, then the image is the graphic content pixel, otherwise, it is the graphic background pixel. It should combined with "AND/OR" conditions when judging.

4. Menu Orientation
MENU

KEY IN/OUT:

KEY IN: Delete the background, and keep the text title.

KEY OUT: Delete the text title, and keep the background.

RED: Red limit, cut-off point condition of ABOVE and BELOW condition in red channel, the range is 0 ~ 248.

GREEN: Green limit, cut-off point condition of ABOVE and BELOW condition in green channel, the range is 0 ~ 248.

BLUE: Blue limit, cut-off point condition of ABOVE and BELOW condition in blue channel, the range is 0 ~ 248.

For details, please refer to the instructions in the manual: How to Realize the Text Overlay Setting.

PIP

Push the [MENU] button to go into the menu items, turn the knob button to select <PIP>, show menus as follows:

PIP: Choose ON to set PIP mode.

LAYOUT: There are 7 PIP layouts, can choose PIP layouts anyone, the corresponding results are as follows.

PIP L+T   PBP L+R   PBP T+B

SELECT: Can choose to set the size or position of IMAGE A or IMAGE B individually.

Note

User can also select image A or image B by function reuse key [SPLIT/6]

4. Menu Orientation

SWAP IMAGE: It can set PIP to swap exchange, when choose ON, it can switch IMAGE A and IMAGE B.

ALPHA: Use can set the image transparency, the regulating range is among 0 to 16.

For details, please refer to the instructions in the manual: How to Set up the PIP.

> **Note**
>
> | User can also push the [PIP/DSK] button to set up the PIP. |
> | --- |

SPLIT

Push the [MENU] button to go into the menu items, turn the knob button to select <SPLIT>, the split modes include <FIXED SPLIT> and <NORMAL SPLIT>.

FIXED SPLIT: Sub menus are as follows:

SPLIT: Split function, can choose "ON" or "OFF". System default "OFF".

HORIZONTAL SPLIT: Horizontal fixed split, choose it and push the number button to set the total horizontal screen number.

VERTICAL SPLIT: Vertical fixed split, choose it and push the number button to set the total vertical screen number.

SPLIT INDEX: Use can choose the split index, and the LED display will show the corresponding image.

H SIZE: The width of the device when do split.

V SIZE: The height of the device when do split.

ADVANCE: H SIZE, V SIZE, H POS and V POS setting. If image quality distorts by improper operation, it can be recover by reset.

NORMAL SPLIT: For normal split, user should enable the split function, that is, turn the knob, and set the <SPLIT> as "ON", push the knob to confirm. System default "OFF". User can set the normal split in the sub menus:

4. Menu Orientation
MENU

SPLIT: Split function, can choose "ON" or "OFF".

H TOTAL: The total width points of LED display that will split.

V TOTAL: The total height points of LED display that will split.

H POS: The horizontal position of the device when do split.

V POS: The vertical position of the device when do split.

H SIZE: The width of the device when do split.

V SIZE: The height of the device when do split.

RESET: If image quality distorts by improper operation, it can be recover by

reset.

ADVANCE: H SIZE, V SIZE, H POS and V POS setting. If image quality

distorts by improper operation, it can be recover by reset.

For details please refer to the instructions in the manual: How to Set up the

SPLIT.

Note

User can also push the [SPLIT] button to set up the SPLIT.

TRANSITION

Push the [MENU] button to go into the menu items, turn the knob button to

select <TRANSITION>, show menus as follows:

DEINTERLACE: Force Deinterlace function, can choose "ON" or "OFF".

ON: Force deinterlace.

OFF: No deinterlace.

IMAGE ENHANCE: Image enhancement function, used for image edge

sharpening, color reduction and image scaling.

MODE: Special effects switching mode.

DISSOLVE: Fade in fade out effects switching.
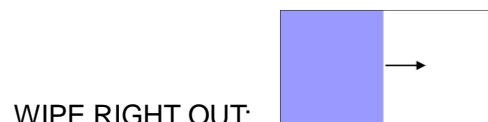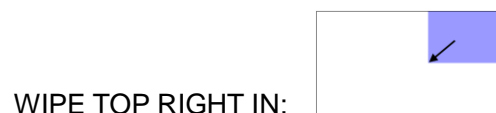
CUT: Fast switching.

4. Menu Orientation
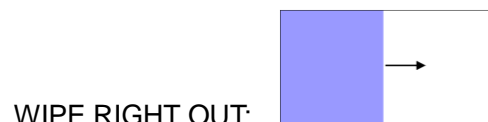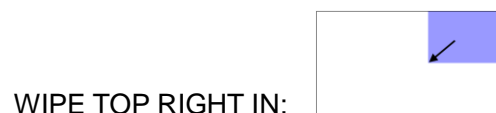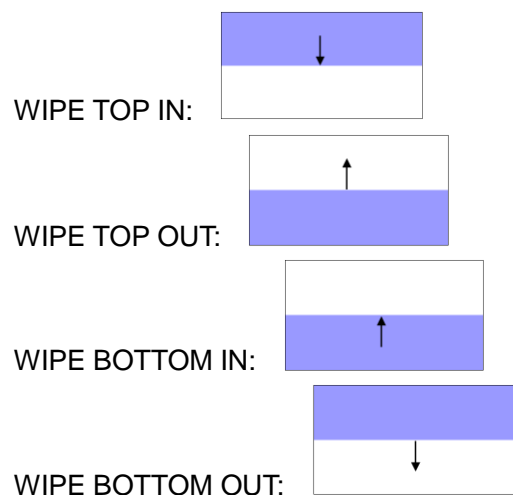
MENU

WIPE SOUARE IN:

WIPE SOUARE OUT:

WIPE TOP LIEFT IN:

WIPE TOP LIEFT OUT:

WIPE TOP RIGHT IN:

WIPE TOP RIGHT OUT:

WIPE BOTTOM LEFT IN:

WIPE BOTTOM LEFT OUT:

WIPE BOTTOM RIGHT IN:

WIPE BOTTOM LEFT OUT:

WIPE LEFT IN:

WIPE LEFT OUT:

WIPE RIGHT IN:

WIPE RIGHT OUT:

4. Menu Orientation
MENU

WIPE TOP IN:

WIPE TOP OUT:

WIPE BOTTOM IN:

WIPE BOTTOM OUT:

Note: Means the image emerging.

Means the image disappearing.

Arrows represents the direction of the image move, that is, the image that

arrow point, is compressed or stretched to the direction that arrow indicates,

until disappear or full screen.

FADE TIME: Switch time setting. Rotate the knob to choose the time and

push the knob to confirm. The switching time ranges from 0 to 3S.

ALPHA: It can set the image transparency, the regulating range is among

0 to 16.

Note

User can also push the [MENU] button two times to set up the TRANSITION.

SCALE

Push the [MENU] button to go into the menu items, turn the knob button to

select <SCALE>, show menus as follows:

H SIZE: Width setting.

V SIZE: Height setting.

H/V SIZE: Width and height equal proportion scale setting.

H POS: Horizontal phase setting.

4. Menu Orientation
MENU

V POS: Vertical phase setting.

RESET: If image quality distorts by improper operation, it can be recover by reset.

For details, please refer to the instructions in the manual: How to Set up the Size and Position of the Single Image.

Note

User can also push the [SCALE] button to set up the size and position.

SAVE SETUP

Push the [MENU] button to go into the menu items, turn the knob button to select <SAVE SETUP>, show menus as follows:

SAVE TO: VENUS X1 provides 36 save modes, users can save the current operation to SAVE1 to SAVE36.

Note

User can also push the [SAVE/1] button to save the parameters.

RECALL SAVE: It can recall the saved user modes via this function.

Note

User can also push the [LOAD/6] button to recall the saved parameters.

DELAY CALL: Set delay the output time. When more than one equipment power on, and the processor is the end equipment in order to improve question that can't identify the input signal and phenomenon that LED screen appear messy code and flash screen, now need to delay the input time.

REAL-TIME SAVE: User can enable or disable the real-time save function, the device will automatically save the modified parameters if choose "ON".

4. Menu Orientation

SYSTEM

Push the [MENU] button to go into the menu items, turn the knob button to select <SYSTEM>, show menus as follows:

SN: Show the serial number of the device.

VERSION: Including software version and hardware version. The software version includes COM. version, firmware version, mainboard version, EXT mainboard version, EXT INPUT1 version, EXT INPUT2 version and EXT INPUT3 version. The hardware version includes mainboard version and ext mainboard version.

TECH SUPPORT: Show the sales, customer service, email, website and telephone.

DATE&TIME: User can view and change the date and time, view the current time, last time, total time and boot times.

ETHERNET: Network setting, include IP address, subnet mask and gateway. System default IP address is 192.168.0.100, subnet mask is 255.255.255.000, gateway is 192.168.000.001.

LOCK FRONT PANEL: Through this setting can choose whether to lock the keys, if the key is locked, the equipment will remind: "Buttons are locked! Press MENU key and hold 5s to release!"

LICENSE SETUP: The device will not work if excess the prescribed time, there are no signal output, it needs to input password and modify the using time to continue to work.

HOT BACKUP: User can enable or disable the hot backup function. Choose "ON" to set the backup signal for BACKUP_1 to BACKUP_5. It will switch to the backup signal if interrupt signal.

DEVICE STATUS: Show the video status, MB status and EXT status.

USER DEFINED BUTTON: User can define the BLACK and SCALE key.

BLACK KEY: System default black function. Push the button, its LED light

4. Menu Orientation

turns on, the output will be switched to black, push the button again, its LED light is off, and output the video image.

Besides BLACK, user can define this button as FREEZE, TEST PATTERN and BRIGHT.

If define this button as FREEZE, push the button, its LED light turns on, and freeze the image. Push the button again, its LED light is off, and output the video image.

If define this button as TEST PATTERN, push the button, its LED light turns on, the output will be switched to test pattern. Push the button again, its LED light is off, and output the video image.

If define this button as BRIGHT, push the button, its LED light turns on, user can adjust the brightness, contrast, saturation, sharpness, color red, color green, color blue and gamma. If image quality distorts by improper operation, it can be recover by reset.

For more details, please refer to: How to User Define the BLACK Key.

SCALE KEY: System default scale function. Push the button to enter the scale menus. Turn the knob to select the relevant submenus.

Besides SCALE, user can define this button as TAKE.

If define this button as TAKE, push the button, its LED light turns on, choose the signal that will switch, and push the **SCALE** (**TAKE**) button, the signal will be switched to the LED display.

For more details, please refer to: How to User Define the SCALE Key.

OLED LUMINANCE: Set the OLED luminance, the adjustment range is 1~15.

FAN CONTROL: User can enable or disable the auto speed function, set the current speed and view the current temperature.

LANGUAGE

4. Menu Orientation
MENU

Through this option, user can choose Chinese or English according to their needs to operate the interface more quickly.

FACTORY RESET

Enter FACTORY RESET to reset the IP, choose YES and push the knob to confirm, then VENUS X1 is reset to its factory settings. After 5 seconds, it completes factory settings and is ready for more operations.

4. Menu Orientation

QUICK MENU

Quick menu function are including: Special effects switching function,

SAVE function, LOAD function, PIP function, SPLIT function, SCALE

function, these functions are separate button defined, so not included in the

MENU.

SPECIAL EFFECTS SWITCHING

Push the [MENU] button two times, and enter the effect switch function

menu, effect menu shown as follows:

```
EFFECT MENU

DEINTERLACE       IMAGE ENHANCE       MODE                    FADE TIME       ALPHA
  ON                  ON                DISSOLVE                  0-1S            0-16
  OFF                 OFF               CUT
                                        WIPE SQUARE IN
                                        WIPE SQUARE OUT
                                        WIPE TOP LEFT IN
                                        WIPE TOP LEFT OUT
                                        WIPE TOP RIGHT IN
                                        WIPE TOP RIGHT OUT
                                        WIPE BOTTOM LEFT IN
                                        WIPE BOTTOM LEFT OUT
                                        WIPE BOTTOM RIGHT IN
                                        WIPE BOTTOM RIGHT OUT
                                        WIPE LEFT IN
                                        WIPE LEFT OUT
                                        WIPE RIGHT IN
                                        WIPE RIGHT OUT
                                        WIPE TOP IN
                                        WIPE TOP OUT
                                        WIPE BOTTOM IN
                                        WIPE BOTTOM OUT
```

DEINTERLACE: Force Deinterlace function, can choose "ON" or "OFF".

ON: Force deinterlace.

OFF: No deinterlace.

IMAGE ENHANCE: Image enhancement function, used for image edge

sharpening, color reduction and image scaling.

MODE: Special effects switching mode.

DISSOLVE: Fade in fade out effects switching.

CUT: Fast switching.

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4. Menu Orientation
QUICK MENU

WIPE SOUARE IN:

WIPE SOUARE OUT:

WIPE TOP LIEFT IN:

WIPE TOP LIEFT OUT:

WIPE TOP RIGHT IN:

WIPE TOP RIGHT OUT:

WIPE BOTTOM LEFT IN:

WIPE BOTTOM LEFT OUT:

WIPE BOTTOM RIGHT IN:

WIPE BOTTOM LEFT OUT:

WIPE LEFT IN:

WIPE LEFT OUT:

WIPE RIGHT IN:

WIPE RIGHT OUT:

4. Menu Orientation
QUICK MENU

WIPE TOP IN:

WIPE TOP OUT:

WIPE BOTTOM IN:

WIPE BOTTOM OUT:

Note: Means the image emerging.

     Means the image disappearing.

Arrows represents the direction of the image move, that is, the image that

arrow point, is compressed or stretched to the direction that arrow indicates,

until disappear or full screen.

FADE TIME: Switch time setting. Turn the knob to choose the time and

push the knob to confirm. The switching time ranges from 0 to3S.

ALPHA: It can set the image transparency, the regulating range is among

0 to 16.

For details please refer to the instructions in the manual: How to Realize

the Special Effects Switching.

SAVE FUNCTION

Push the [SAVE/1] button, the button led light turn on, and enter the save

function menu. OLED module show as follows:

```
     SAVE TO
—>SAVE 1
          Button is on can be saved
          Button flashes will be overwrite
```

User can operate according to the OLED module information.

4. Menu Orientation
QUICK MENU

For details please refer to the instructions in the manual: How to Save the

Parameter.

LOAD FUNCTION

Push the [LOAD/6] button, and enter to the load function menu. OLED

module show as follows:

```
   RECALL SAVE
—>SAVE 1
        Button on is ready for recall
        Button flashes means just recall
```
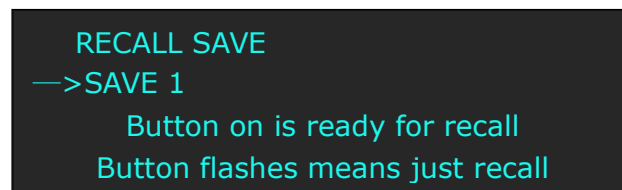
User can operate according to the OLED module information.

For details please refer to the instructions in the manual: How to Load the

Saved Parameter.

PIP FUNCTION

Push the [PIP/DSK] button, the button led light turn on, and enter the PIP

function menu. OLED module show as follows:

PIP: Choose ON to set PIP mode.

LAYOUT: There are 7 PIP layouts, Can choose PIP layouts anyone, the

corresponding results are as follows.

PIP L+T   PBP L+R   PBP T+B

SELECT: Can choose to set the size or position of IMAGE A or IMAGE B

individually.

4. Menu Orientation
QUICK MENU

Note

Function reuse key [SPLIT], select image A or image B.

SWAP IMAGE: It can set PIP to swap exchange, when choose ON, it can switch IMAGE A and IMAGE B.

ALPHA: Use can set the image transparency, the regulating range is among 0 to 16.

For details, please refer to the instructions in the manual: How to Set up the PIP.

SPLIT FUNCTION

Push the [SPLIT] button, the button led light turn on, and enter the SPLIT function menus. The split modes include <FIXED SPLIT> and <NORMAL SPLIT>.

FIXED SPLIT: Sub menus are as follows:

SPLIT: Split function, can choose "ON" or "OFF". System default "OFF".

HORIZONTAL SPLIT: Horizontal fixed split, choose it and push the number button to set the total horizontal screen number.

VERTICAL SPLIT: Vertical fixed split, choose it and push the number button to set the total vertical screen number.

SPLIT INDEX: Use can choose the split index, and the LED display will show the corresponding image.

H SIZE: The width of the device when do split.

V SIZE: The height of the device when do split.

ADVANCE: H SIZE, V SIZE, H POS and V POS setting. If image quality distorts by improper operation, it can be recover by reset.

NORMAL SPLIT: For normal split, user should enable the split function, that is, turn the knob, and set the <SPLIT> as "ON", push the knob to confirm.

4. Menu Orientation
QUICK MENU

System default "OFF". User can set the normal split in the sub menus:

SPLIT: Split function, can choose "ON" or "OFF".

H TOTAL: The total width points of LED display that will split.

V TOTAL: The total height points of LED display that will split.

H POS: The horizontal position of the device when do split.

V POS: The vertical position of the device when do split.

H SIZE: The width of the device when do split.

V SIZE: The height of the device when do split.

RESET: If image quality distorts by improper operation, it can be recover by

reset.

ADVANCE: H SIZE, V SIZE, H POS and V POS setting. If image quality

distorts by improper operation, it can be recover by reset.

For details please refer to the instructions in the manual: How to Set up the

SPLIT.

SCALE FUNCTION

Push the [SCALE] button, the button led light turns on, and enter the

SCALE function menus. User can adjust the following items by the knob or

number buttons.

H SIZE: Width setting.

V SIZE: Height setting.

H/V SIZE: Width and height equal proportion scale setting.

H POS: Horizontal phase setting.

V POS: Vertical phase setting.

RESET: If image quality distorts by improper operation, it can be recover by

reset.

For details, please refer to the instructions in the manual: How to Set up the

Size and Position of the Single Image.

RGBlink

5. Communication Software Guideline

In This Chapter

This chapter provides detailed information about the control

communication software. The following topics are discussed:

- Software Installation

- Software Operation

- How to Connect Windows Control Program by RS232

  Interface

- How to Connect Windows Control Program by USB Interface

- How to Connect Windows Control Program LAN Interface

Software Installation

VENUS X1 video processor is configured with user friendly communication software, support drag and drop operation for edit and display. Also it can be customized with schedule function.
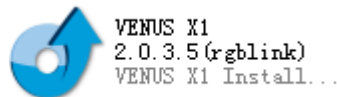
Double click to install, English version default for use, click "Next" to next dialog:
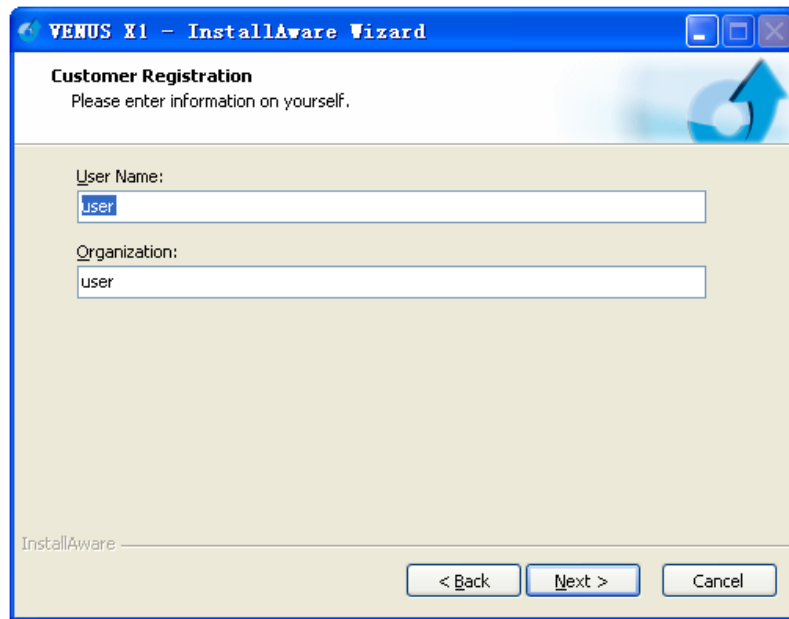
And in next dialog is the user agreement of the software, click Agree to go on:
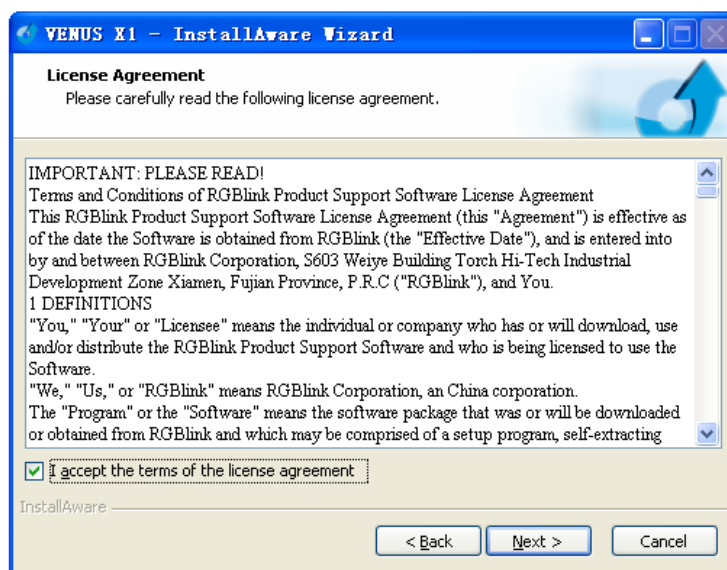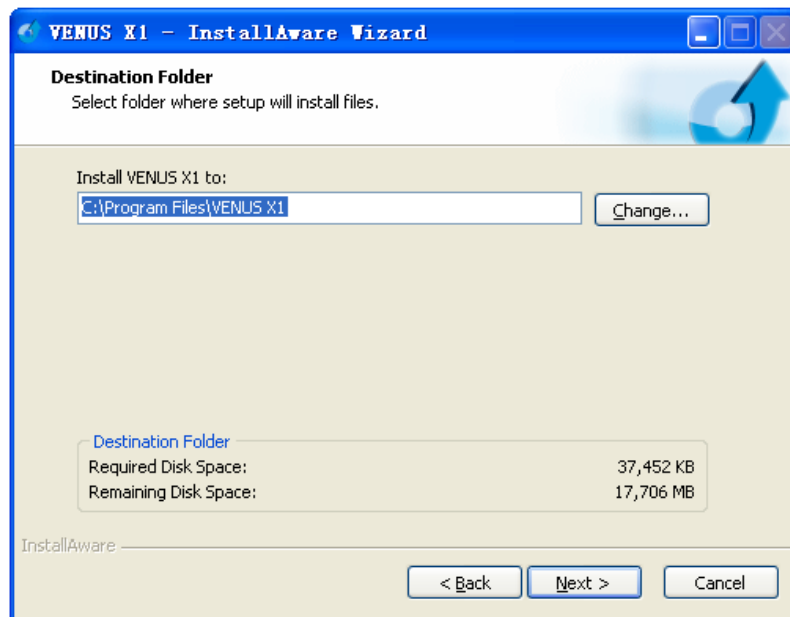
5. Communication Software Guideline
Software Installation

User can select "Change" to choose the VENUS X1 install software:

5. Communication Software Guideline

Software Installation

Click "Next" to go on:

Click "Next" to go on:
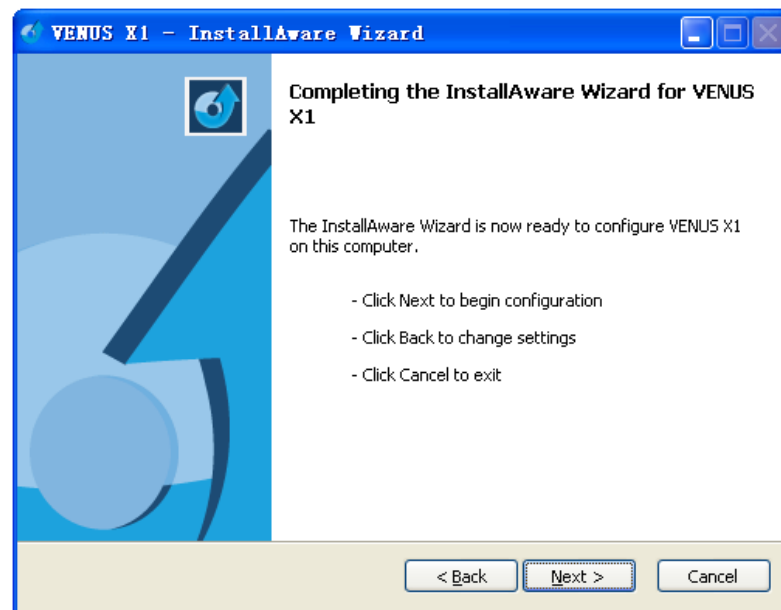
5. Communication Software Guideline
Software Installation

Click "Next" to go on:
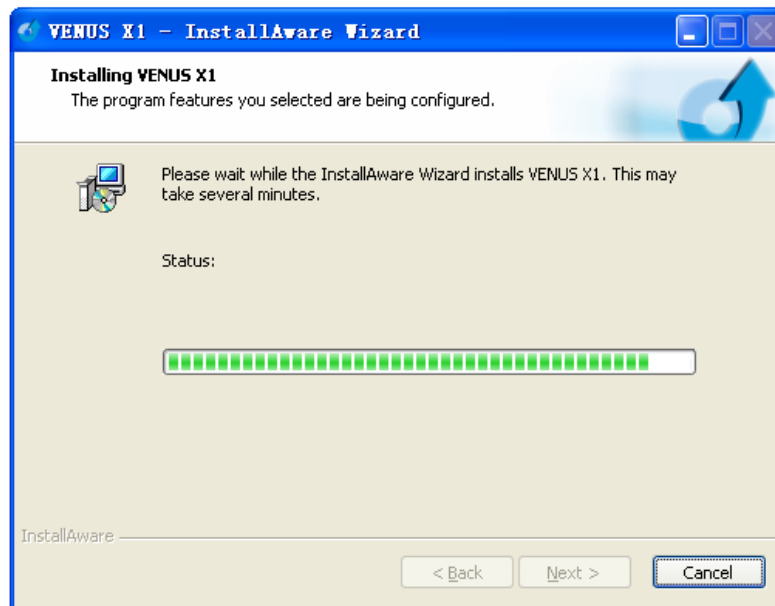
Click "Finish" and ready to run VENUS X1 console.

Software Operation

Install communication which comes with the package of VENUS X1 device.
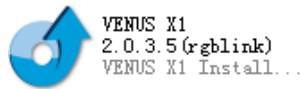
Double click ![VENUS X1 2.0.3.5(rgblink) VENUS X1 Install...] icon from home screen to run the software.

Double click ![VENUS X1] icon to run the software.

VENUS X1 communication software interface as shown:
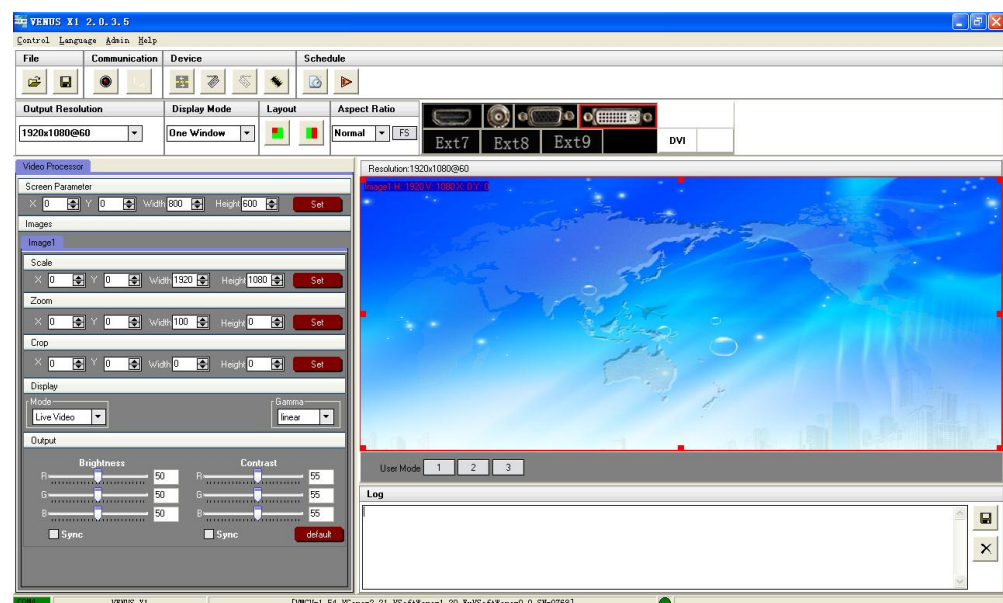
Connection

Besides the power cord, the product default equip with the RS-232 cable, DB9F cable, and RJ11 (6 B4C) cable to connect VENUS X1 to the windows control program.

For more detailed information, please refer to: "**How to Connect Windows Control Program by RS232 Interface**". In addition, we also equipped with USB cable, you can also connect the computer and video processor with it to control PC software. Please refer to "**How to Connect Windows Control Program by USB Interface**" for more detailed information.

5. Communication Software Guideline
Software Operation

Note

> RS 232 serial cable and USB cable can do
> 100M program upgrade.

Ethernet, user can fill any number less than 1023 in local port, the remote

port must be 192.168.0.100 and the remote port must be 1000. After

setting above, click the icon [icon] to connect with the net work. If

successful connect, the icon becomes [icon], status on the left button

showing UDP1000 Opened.

Use
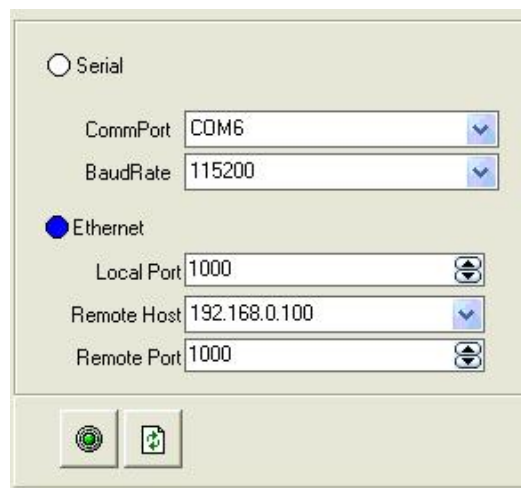
File Toolbar

[icon] : Open script. User can open saved script and alter its parameters.
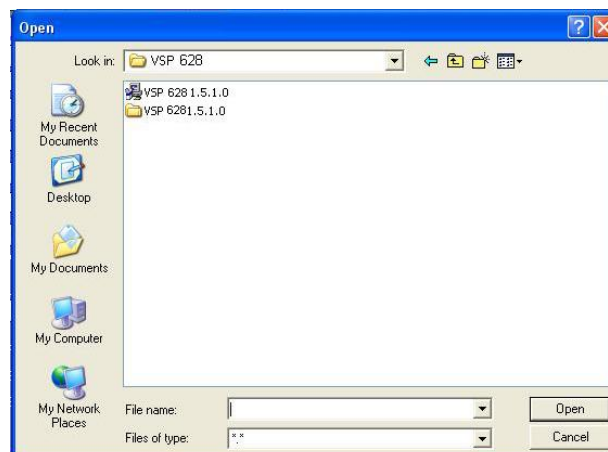
5. Communication Software Guideline
Software Operation

: Save script. Save current user parameters as script to the prescribed path.

: Open COM.
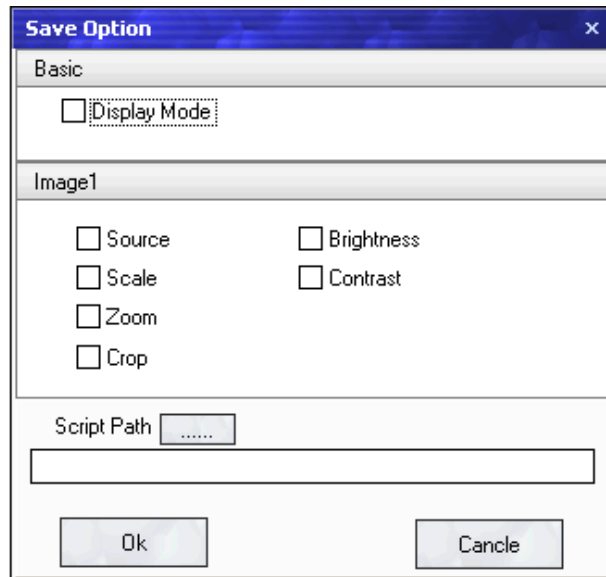
: Close COM.

: Set COM.

Communication Toolbar

: Open COM.

: Close COM.

: Set COM.

Device Toolbar

: Synchronization.

: Save to flash.
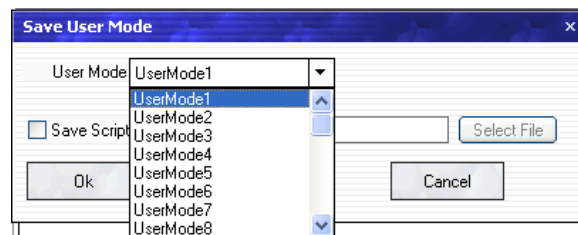
: Load form flash.

5. Communication Software Guideline
Software Operation
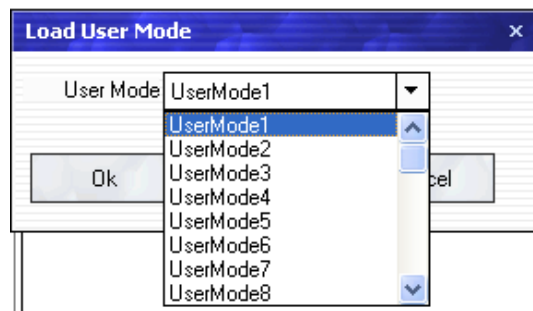
: Factory setup.

Schedule Toolbar

: Customize schedule.
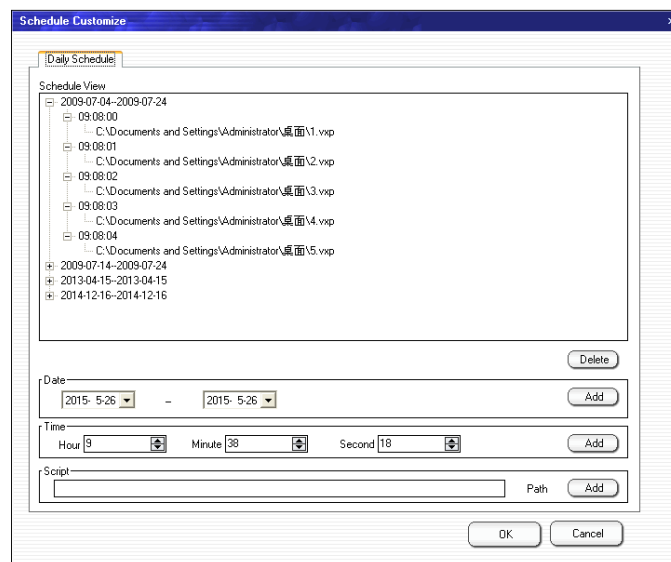
: Execute schedule. Execute tasks according to schedule.

5. Communication Software Guideline
Software Operation

Output Resolution Toolbar

User can choose different output resolution by selecting from pull down list.

VENUS X1 has 22 output resolutions for users selection.

Output Resolution

720x480@60p

720x480@60p
720x576@50p
1280x720@60
1280x720@59.94
1280x720@50
1280x720@30
1280x720@29@97
1280x720@25
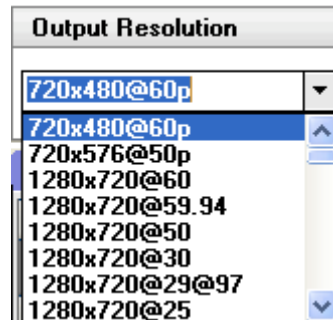
Note

Same as MENU → OUTPUT → STANDARD

Display Mode Toolbar

Choose to work in one window or two window.

Display Mode

One Window

One Window
Two Window

Layout Toolbar

In single channel mode, the dialog is in grey and it is in limited use.

And in dual channel mode, user can set the device to work in PIP or PBP

mode directly with quick preset layout button as following.

Layout
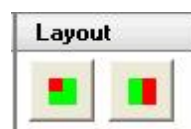
Aspect Ratio Toolbar

Users can select 4:3, 16:9 or Normal in the pull-down options.

5. Communication Software Guideline
Software Operation
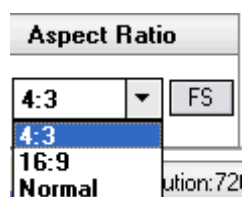
Note

> Same as MENU → OUTPUT → ASPECT
>
> RATIO.

Signal Input Toolbar

The white area displays the name of input signal when click the input interface on the left. The red box means current selected interface.

When user select two window mode, click the input interface on the left to choose the channel signal. The green box means current select channel 2.

Screen Parameter Toolbar

User can set size and position of the screen, mainly applies to LED screens users. After setting screen parameter, in PIP or PBP mode, the image will display on corresponding screen.
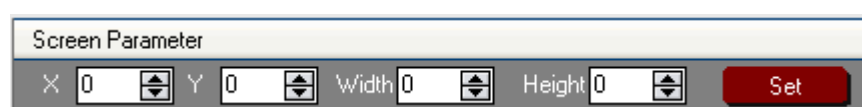
Note

> Same as MENU → OUTPUT → SCREEN
>
> PARAMETERS

5. Communication Software Guideline

Software Operation

Image Toolbar

Scale, zoom or crop the image. Image 2 can't choose in one window mode.
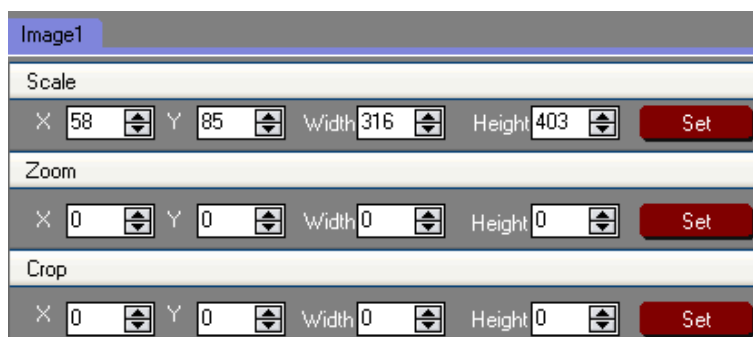
Same operation in two window mode.
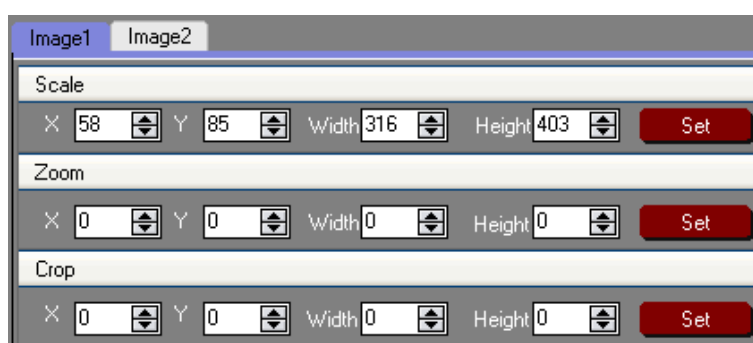
Display Toolbar
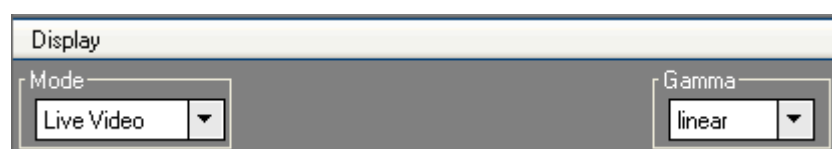
Users can set the display mode and gamma. There are three modes, black,

live video and freeze frame. It outputs black signal when choose black, and

the video plays in live mode and stop playing in freeze mode.

Generally, it is not recommend to set the gamma, since LED screen itself

has Gamma function. For further information, users can contact with our

customer service.

Output Toolbar

User can customize the brightness and the contrast.

5. Communication Software Guideline
Software Operation
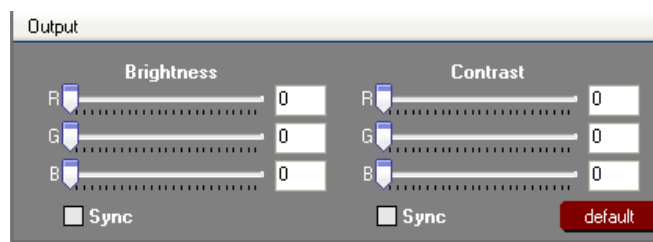
Note

> Same as MENU ➝ PICTURE ➝
>
> IMAGE QUALTY

Images Display Toolbar

User can customize the image position and size by dragging the image in

this area. This process is sync to the parameters in image toolbars.
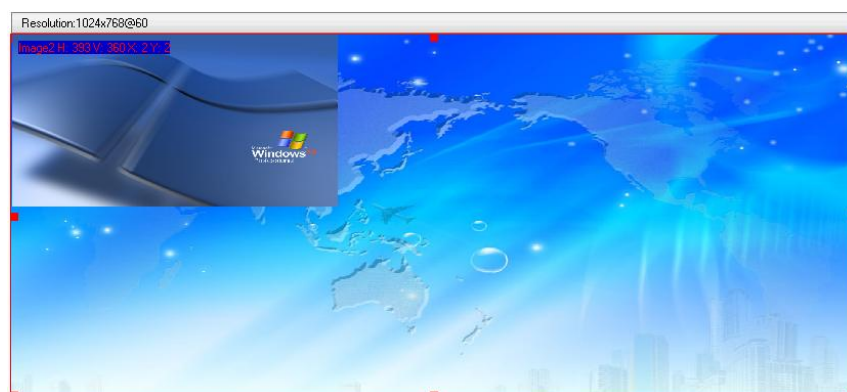
User Mode Toolbar

Users can recall the saved user mode1, mode2 or mode3.

Log Toolbar

User can save or delete the operate log file.
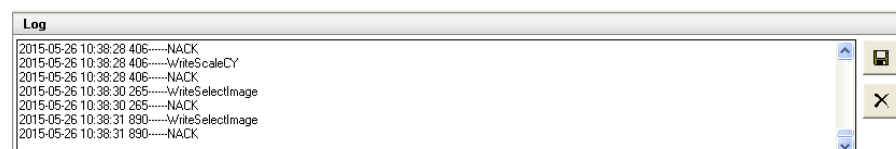
5. Communication Software Guideline
Software Operation

Information Toolbar

It is the VENUS X1 connect state, device name, software version and serial number.

Control
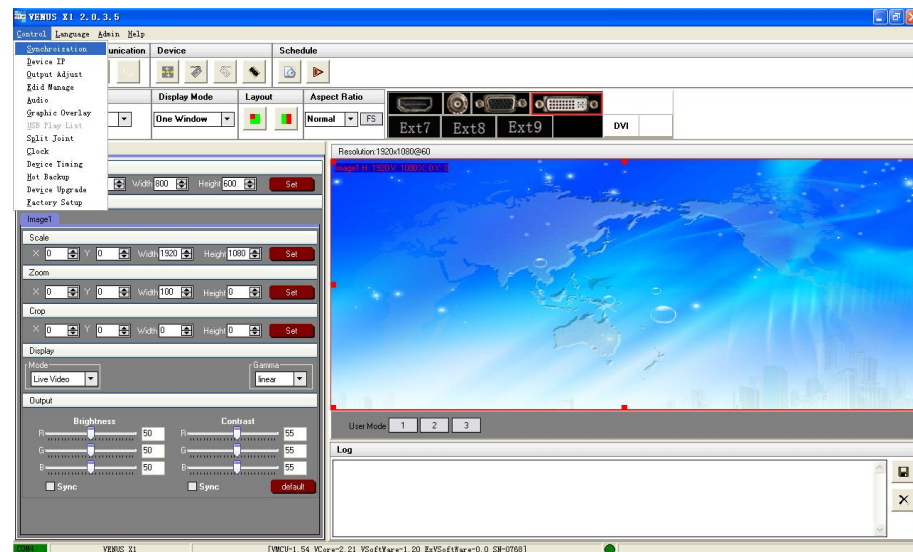
Synchronization:

Read the current parameters of VENUS X1.

Device IP:

Users can set equipment IP, mask and gateway, usually used in one computer control or remote control several computers. It takes effect immediately after users change IP through serial port; and when users change IP through network, it takes effect after reopen the software.

5. Communication Software Guideline
Software Operation
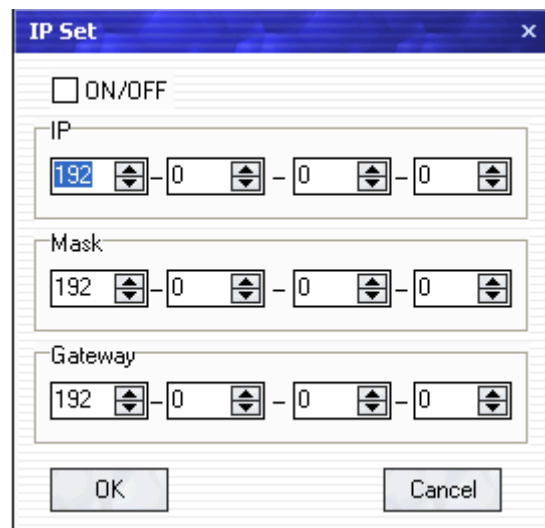
Output Adjust:

Choose the output port and set the output mode, data range, bit depth and

DE.
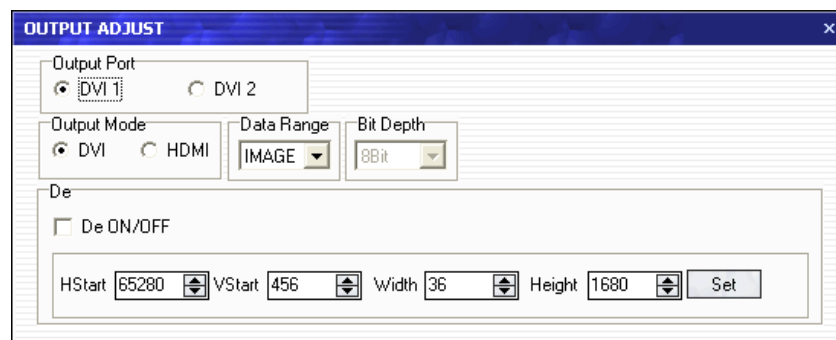
EDID Manage:

Choose the EDID date source and input port.
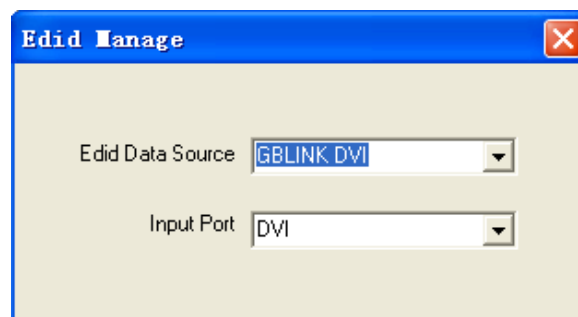
VENUS X1 supports the EDID manage ports and types are as follows:

5. Communication Software Guideline

Software Operation

Supported EDID Manage Port	Supported EDID Manage Type
VGA	RGBVGA, OUT_VGA, FOLLOW, CUSTOM
DVI	RGBDVI, RGBHDMI, OUT_DVI1, OUT_DVI2, FOLLOW, CUSTOM
EXT_HDMI	RGBDVI, RGBHDMI, OUT_DVI1, OUT_DVI2, FOLLOW, CUSTOM
EXT_VGA	RGBVGA, OUT_VGA, FOLLOW, CUSTOM
EXT_DVI	RGBDVI, RGBHDMI, OUT_DVI1, OUT_DVI2, FOLLOW, CUSTOM

Audio:

User can enable or disable the audio function. If choose "ON", user can set

the volume, mode, DVI and DP.
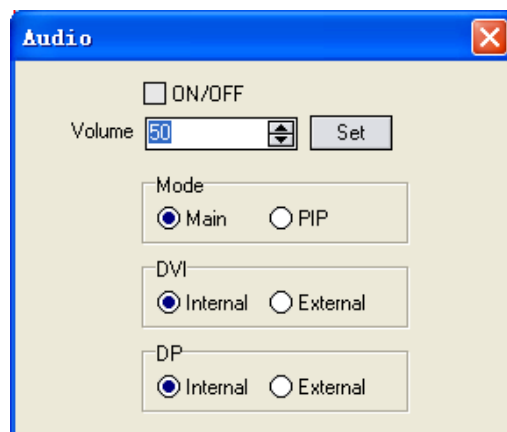
Graphic Overlay:

Choose the preset mode, blend mode, and set the alpha and color.
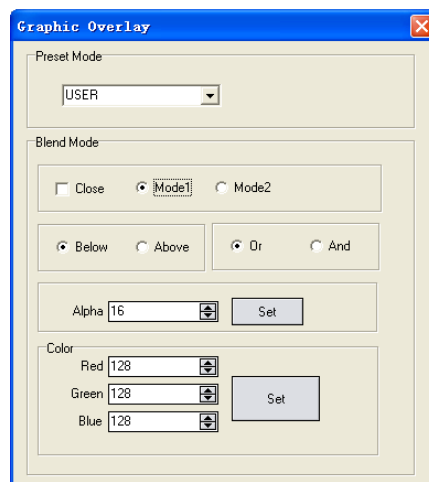
5. Communication Software Guideline

Software Operation

Split Joint:

User can enable or disable the split joint function. When choose "ON",

choose the split mode, and set Equ Split or UnEqu Split according to actual

need.
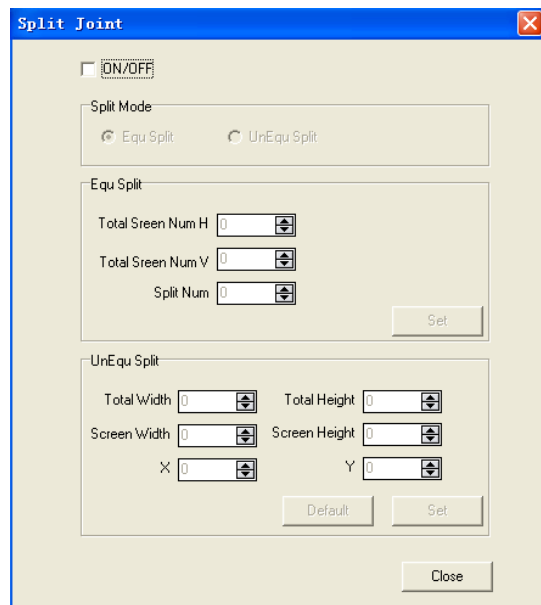
Clock：

Users can set or adjust lower computer time through "Clock".
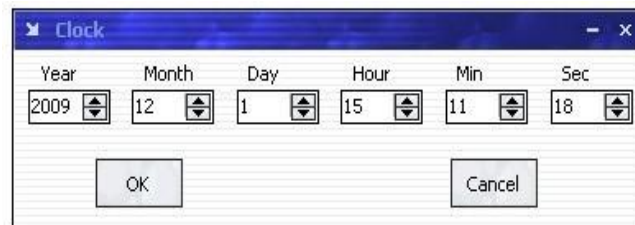
Device Schedule:

Users can set up VENUS X1 to play the appointed input video

automatically in time and operation of one window or two windows, and

scale the size and position.

Users can setup up to 10 timing operation in the schedule.

5. Communication Software Guideline
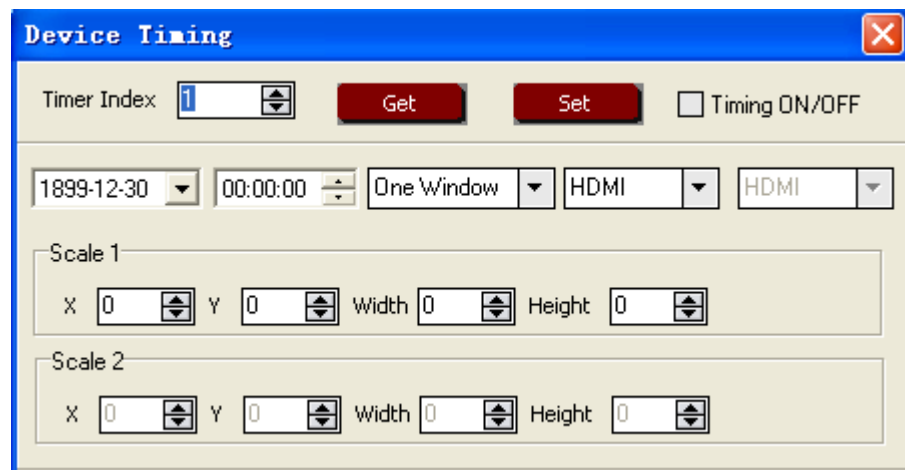
Software Operation

Hot Backup:

User can enable or disable the hot backup function. Choose "ON" to set the

backup signal for BACKUP_1 to BACKUP_5. It will switch to the backup

signal if interrupt signal.
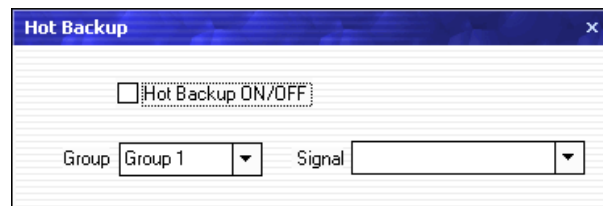
Device Update:
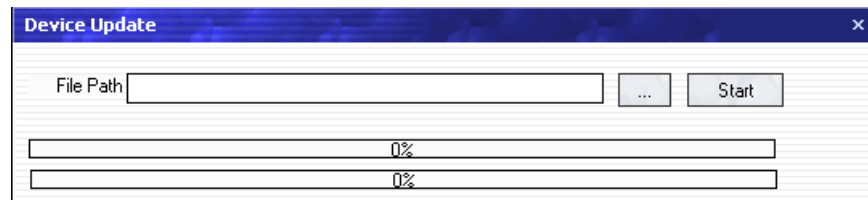
Factory Setup:

Click "Factory Setup", previously saved user mode will be cleared.

Language

This software supports both Chinese and English, user can switch the

language by "Language" option.

Admin

Advance Debug: User should input the password in the "Admin

5. Communication Software Guideline
Software Operation

Password" dialog for advance debug:
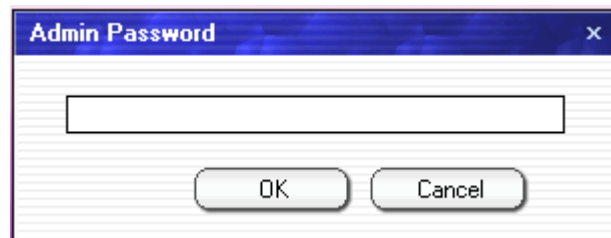
Note

Advance is only done by engineer. If need,

please connect us for password.

Help

Version Explain: Show the content of software update history.

About: Show software version and company information.
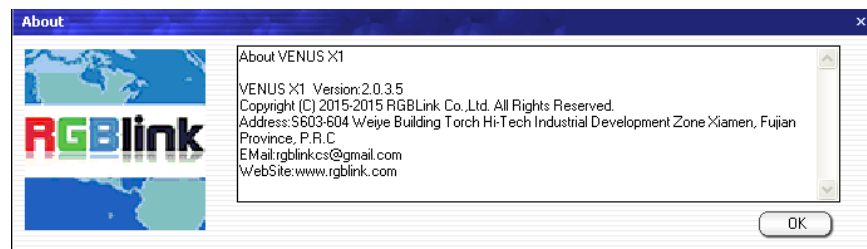
How to Connect Window Control Program by RS232 Interface

Firstly, install the control software in your PC.

Take out the RS 232 cable as following（RS-232, with 9-pin on one end，RJ 11 on the other side）. Connect one side of the RJ11 download line to the RS232 on the video processor VENUS X1, and the other side to be connected to the serial port on the PC.
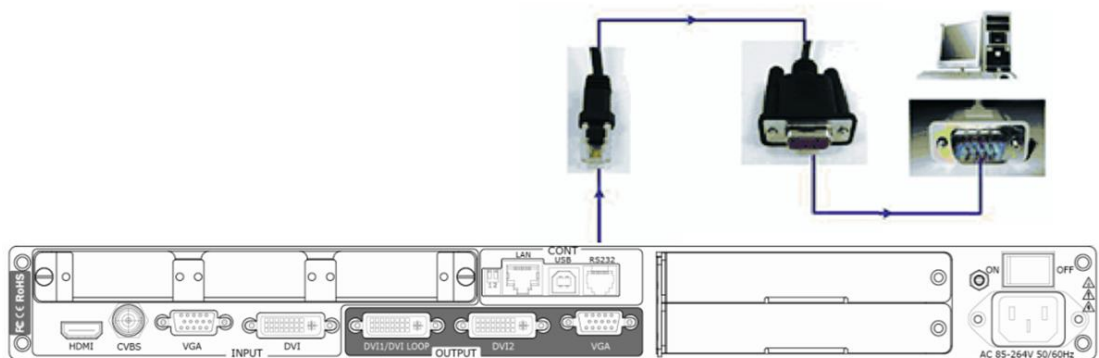
There is no any serial port on your PC, you will need another Serial to USB adapter. Connect one end of the RJ11 download line to the RS232 on the video processor. Connect the end of USB-side to the PC. Ensure the cable connection is good. Turn on the Video Processor VENUS X1.

Right click the [My Computer] on the home screen of control PC. Enter [Attribute], Find [Hardware] Option, as following.

5. Communication Software Guideline

How to Connect Windows Control Program by RS232 Interface
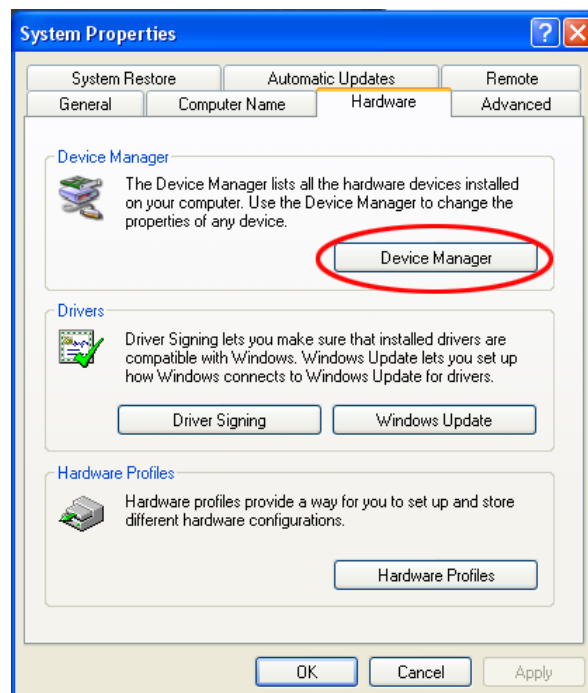
Click [Device Manager] "+" on the left, check the COM number, as following,

COM1 is offered.

Remember the COM you are using and then run the control software, find

[Communication] option. In default, first time user have to click

button, as following:
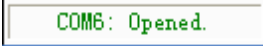
5. Communication Software Guideline
How to Connect Windows Control Program by RS232 Interface
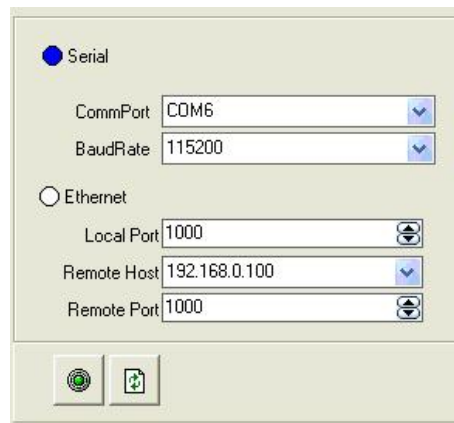
Check and tap [Serial], Serial Port , for example, is **COM6** which is checked

from device manager. Set VENUS X1 Boud Rate to be :115200, Click

[Confirm] after setting.

Click [open serial], check if [COM] icon is on the bottom right

corner，when there is the prompt green showing on

the software, it means the communication is ok , and you can use the

software to control the device now.

Note

> If power off during communication, should close
>
> the port , by first, and plug in out of the USB
>
> and do communication.

How to Connect Windows Control Program by USB Interface

Install the driver.

Connect the USB cable to the PC and the video processor. Turn on the VENUS X1, for the first time to use USB, the PC will remind finding the new hardware and ask to install the driver for this new driver:

Install from the list or specified location, click "NEXT":
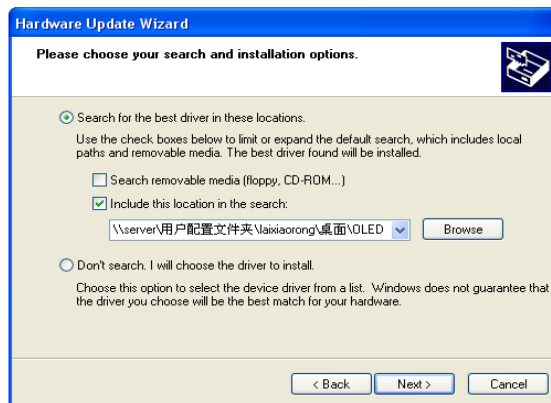
Press "browser" to find the driver, and click "NEXT":

5. Communication Software Control Guide
How to Connect Window Control Program by USB Interface
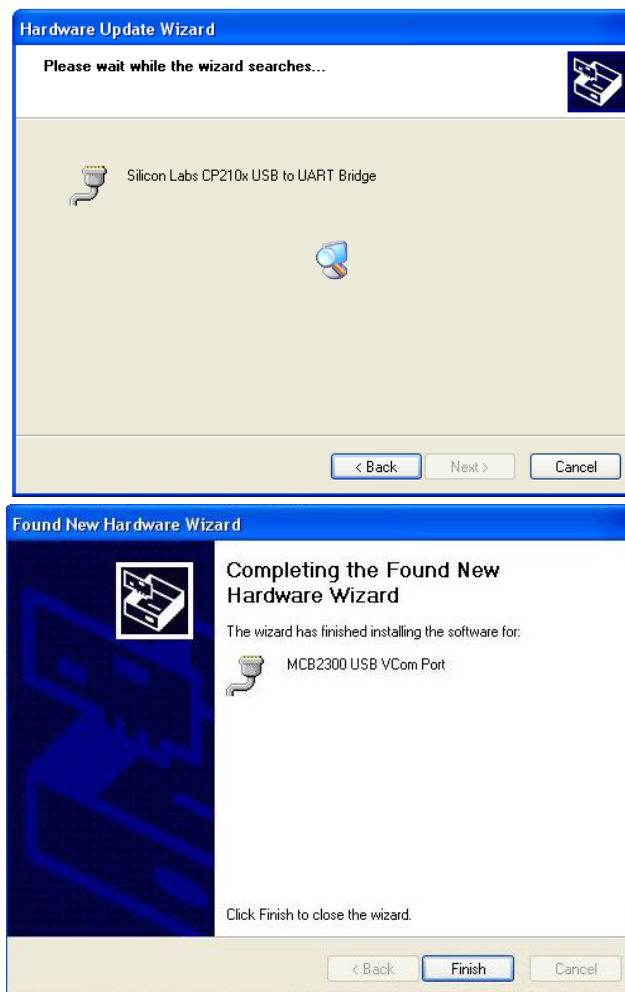
When the installation finish, can go to check the installed COM port inside

the device management, as following image shows:

5. Communication Software Control Guide
How to Connect Window Control Program by USB Interface
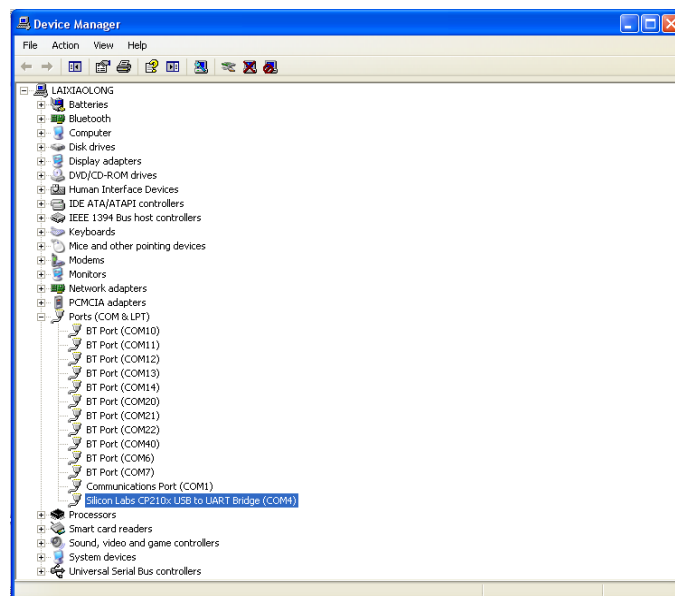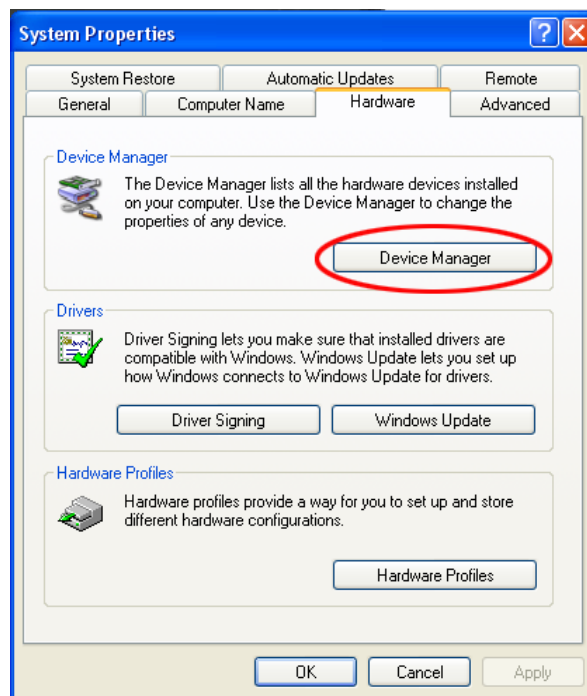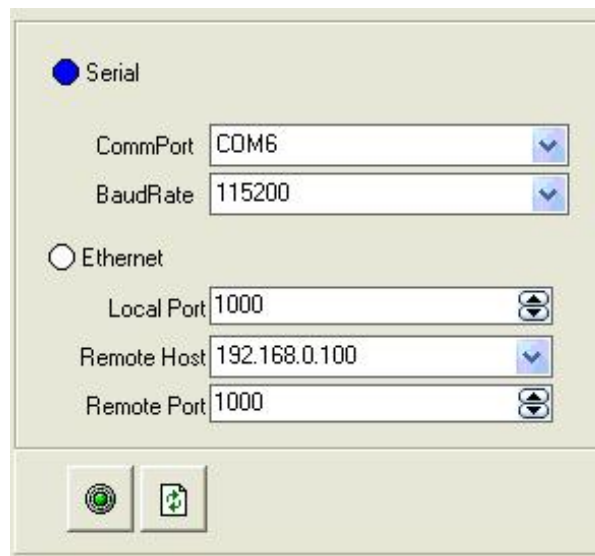
Install the console software, and run after install, shows the interface of the console as following:

Select the COM as installed just now, and set the VENUS X1 Boud Rate to be: 115200.

5. Communication Software Control Guide
How to Connect Window Control Program by USB Interface

Press to start communication, when there is green point in the right down corner showing on the software, it means the communication is ok, and you can use the software to control the device now, the software operation is the same as VENUS X1.

How to Connect Windows Control Program by LAN Interface

First, install the windows control software to the control computer;

Connect VENUS X1 and computer with cable, the connection diagram is as follow:
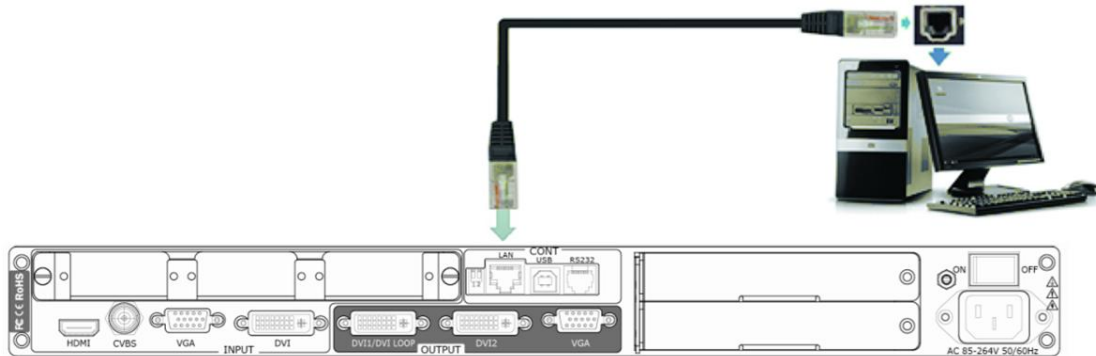
Power on VENUS X1 and start the network function, specific steps as below:

The first step: push MENU button, login MENU—SYSTEM—ETHERNET，check the IP address of the equipment, the equipment factory default IP address : 192.168.0.100.

The second step: check computer IP address:

Click "start", and click "Run" in start menu ,
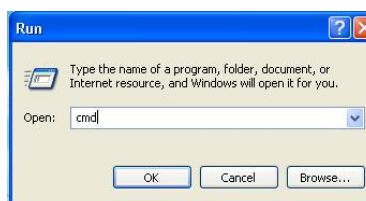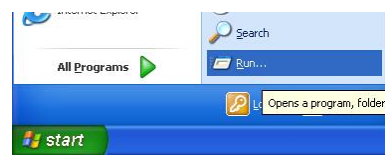
Enter and put <cmd> , then click "OK".

Enter <ipconfig> :

5. Communication Software Control Guide
How to Connect Windows Control Program by LAN Interface
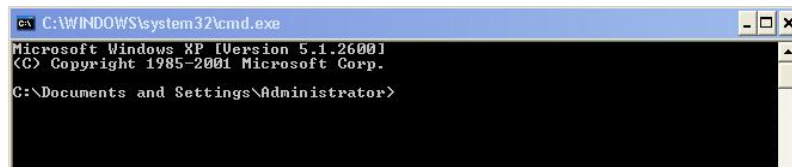
Then press <Enter> button, the IP address (the red circle) will display on

the computer: 192.168.0.132 .
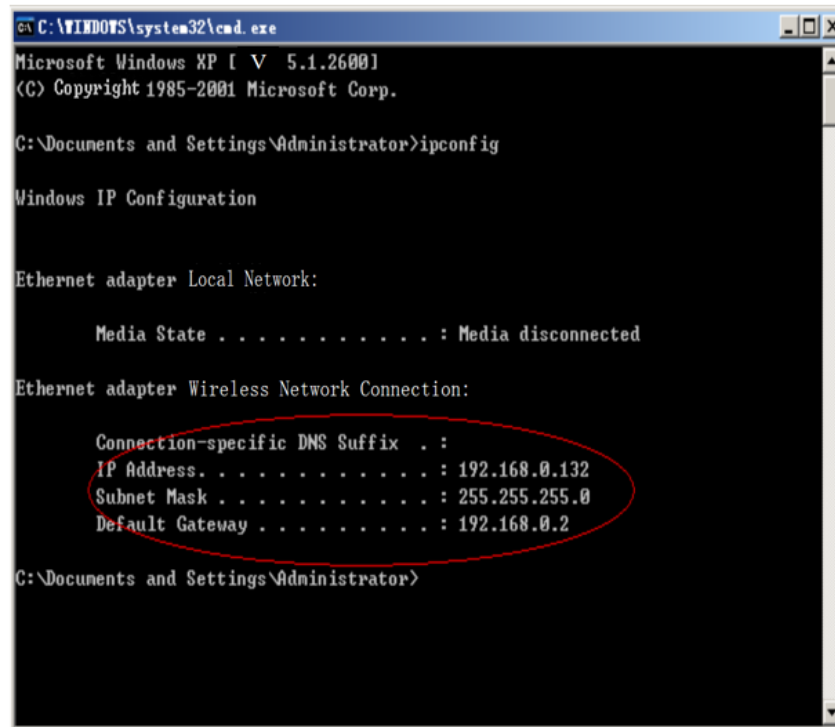
The third step: Equipment IP address :192.168.0.100.

Computer IP address :192.168.0.132.

The fourth step: the two IP address are in the same band,

i.e.192.168.0.XXX, the fourth section numbers (XXX) will not

repeat previous.

If so, the communication connection can be built by line CAT5.

Note

> If computer IP address and equipment IP address are not in same band, For example, the computer IP address is 218.032.010.201. We need to revise the computer IP address to 192.168.0.xxx.
> Open network connections, right click on

5. Communication Software Control Guide
How to Connect Windows Control Program by LAN Interface

> properties, select Internet protocol (TCP/IP), then click properties,
>
>
>
> , . Now we can revise the equipment IP address to the same band with that of computer 192.168.0.XXX.
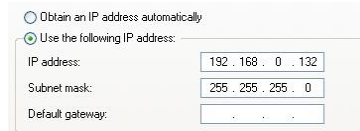
The fifth step: Open windows control software, click icon, Interface display as below:

Select [Ethernet]:
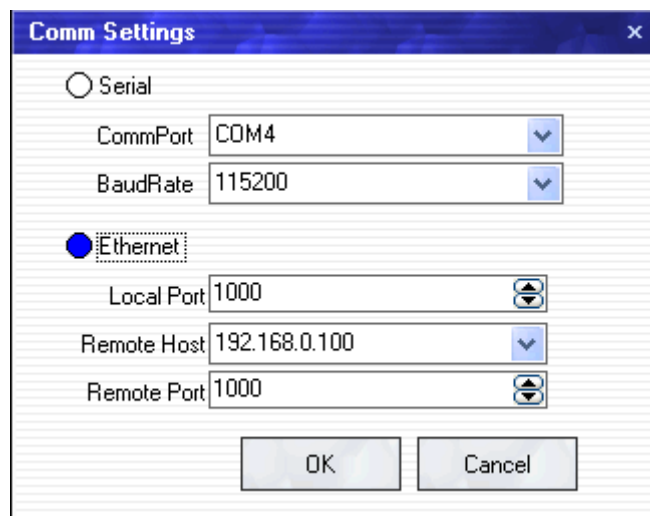
Input equipment IP address, click [OK].

Click to open the serial port, if the [Comm] button (in the lower-right corner of the control software interface) is green, and log outputs information smoothly, then you would control the device through PC software.

6. System Setup and Operations

In This Chapter

This chapter provides comprehensive instructions for system setup and operations. The following topics are discussed:

- Interface and Input Signal Option
- How to Realize Single Image Switching
- How to Set up the PIP
- How to Set up the SPLIT
- How to Set the Size and Position of the Single Image
- How to Choose and Custom Output Resolution
- How to Realize the Screen Size Setting
- How to Zoom the Image
- How to Realize the Text Overlay Setting
- How to User Define the BLACK Key
- How to User Define the SCALE Key
- How to Realize the TAKE Mode
- How to Realize the Special Effects Switching
- How to Realize the Audio Setting
- How to Use Black Out
- How to Realize LAN Remote Control Settings
- How to Save the Parameter
- How to Load the Saved Parameter

Interface and Input Signal Option

VENUS X1 Back Panel:
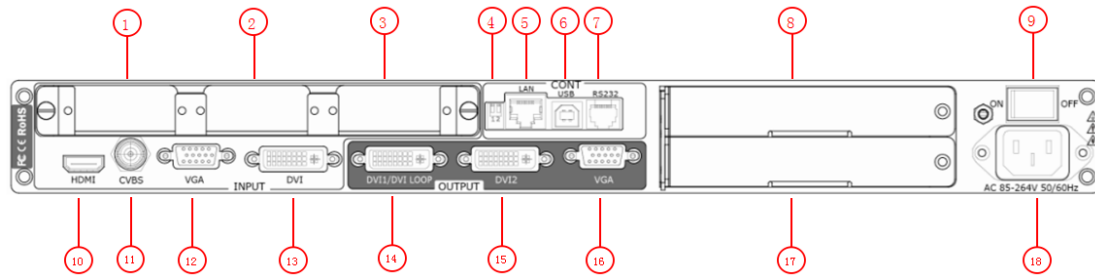
NO	INTERFACE	NO	INTERFACE
1. 2. 3	Optional Module Slots	11	CVBS Input BNC
4	DIP Switch	12	VGA Input DB15
5	10/100M Interface	13	DVI Input DVI-I
6	USB Interface	14	DVI/DVI LOOP Output DVI-I
7	RJ11 (RS232) Interface	15	DVI Output DVI-I
8. 17	Sending Card Interface	16	VGA Output DB15
9	Illuminated Power Switch	18	Power IEC-3 Port
10	HDMI Input HDMI-A		

14. 15. DVI output, use for connecting the sending card of LED screen,

and support output formats as following:

800×600@60, 1024×768@60, 1024×768@75, 1280×720@50,

1280×720@60, 1280×768@60, 1280×800@60, 1280×1024@60,

1360×768@60, 1366×768@60, 1400×1050@60, 1440×900@60,

1536×1536@60, 1600×1200@60, 1680×1050@60, 1920×1080@50,

1920×1080@60, 1920×1200@60, 2048×1152@60, 2560×812@60,

2560×816@60, 1536×1536@60.

16. VGA output, connect to monitor or projector which has VGA interface.

Interface, and support output formats as following:

800×600@60, 1024×768@60, 1024×768@75, 1280×720@50,

1280×720@60, 1280×768@60, 1280×800@60, 1280×1024@60,

6. System Setup and Operations
Interface and Input Signal Option

1360×768@60, 1366×768@60, 1400×1050@60, 1440×900@60,

1536×1536@60, 1600×1200@60, 1680×1050@60, 1920×1080@50,

1920×1080@60, 1920×1200@60, 2048×1152@60, 2560×812@60,

2560×816@60, 1536×1536@60.

14. DVI Loop out, connect to the DVI input of the next VENUS X1 or the

device with DVI input.

10. HDMI Input（**HDMI-A Port**） Input the image signal from computer.

11. CVBS Input（**BNC Port**）Can receive standard video signal from

players, cameras etc. Input supported resolution 480i and 576i via BNC.

Supported standards include: PAL, NTSC and SECAM.

12. VGA Input（**DB15 Port**）Can support HD player, computer, video signal.

Input signal through the DB15 interface.

13. DVI Input（**DVI-I Port**）Input the video signal from computer, DVI signal

generator. If the EDID is HDMI, the DVI can be compatible with HDMI 1.3.

How to Realize Single Image Switching

System default DVI to the current input source, if need seamless switching other source such as VGA, push the VGA button.

DVI button light turns off after pushing VGA button. VGA button light will be on if the VGA signal is effective and stable. And if the VGA signal is invalid or no input, VGA button light will flash.
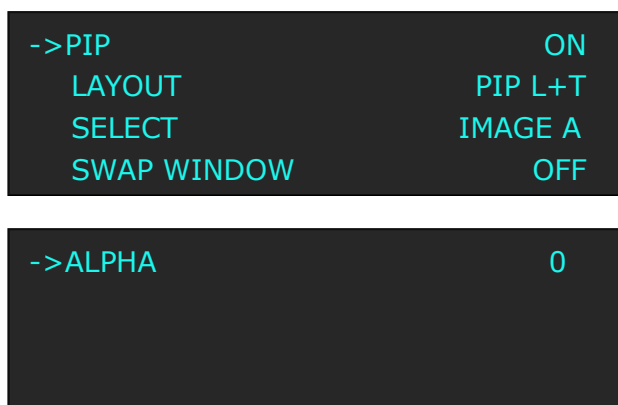
The same method can switch the signals among CVBS, HDMI and optional input signal.

How to Set up the PIP

Push the [PIP/DSK] button，button LED light turns on, and enter to the PIP function menu. OLED module show as follows:

```
->PIP                    ON
   LAYOUT           PIP L+T
   SELECT           IMAGE A
   SWAP WINDOW         OFF
```

```
->ALPHA                   0

```

LAYOUT: Can choose PIP layouts, the corresponding results are as follows:

PIP L+T   PBP L+R   PBP T+B

SWAP WINDOW: It can set PIP to swap exchange, when choose ON, it can exchange IMAGE A and IMAGE B.

ALPHA: Can set the image transparency, the regulating range is 0 to 16.

SELECT: Can choose to set the size or position of IMAGE A or IMAGE B individually.

Note

> User can also push [SPLIT] function reuse key to select IMAGE A or IMAGE B.

How to Set up the SPLIT

SPLIT is used when multiple VENUS X1 are used in cascade mode. When do cascade, connect the signals to the signal distributor first, then connect from the outputs of the signal distributor to each input of VENUS X1. User can also do cascade via DVI LOOP port, and it needs to select "DVI LOOP" for <DVI1 OUTPUT> in menus.

The operations are as follows:

Push the [SPLIT] button, the button LED light will turn on, and enter the split function menus. Turn the knob to choose the split mode, there are two split modes, fixed split and normal split, the OLED module show as follows:

```
—>FIXED SPLIT                         >>
   NORMAL SPLIT                       >>
```

FIXED SPLIT: Menus are as follows:

```
->SPLIT                              OFF
   HORIZONTAL SPLIT                    1
   VERTICAL SPLIT                      1
   SPLIT INDEX                         1
```

```
->H SIZE                           1920
   V SIZE                          1080
   ADVANCE                           >>
```

SPLIT: Split function, can choose "ON" or "OFF". System default "OFF".

HORIZONTAL SPLIT: Horizontal fixed split, choose it and push the number button to set the total horizontal screen number.

VERTICAL SPLIT: Vertical fixed split, choose it and push the number button to set the total vertical screen number.

SPLIT INDEX: Use can choose the split index, and the LED screen will show the corresponding image.

6. System Setup and Operation
How to Set up the SPLIT

H SIZE: The width of the device when do split.

V SIZE: The height of the device when do split.

ADVANCE: H SIZE, V SIZE, H POS and V POS setting. If image quality

distorts by improper operation, it can be recover by reset.

NORMAL SPLIT: For normal split, user should enable the split function, that

is, turn the knob, and set the <SPLIT> as "ON", push the knob to confirm.

System default "OFF". User can set the normal split in the sub menus:

```
—>SPLIT                      ON
   H TOTAL                  1920
   H TOTAL                  1080
   H POS                       0
```

```
—>V POS                       0
   H SIZE                   1920
   V SIZE                   1080
   RESET
```

```
->H SIZE                   1920
  V SIZE                   1080
  ADVANCE                    >>
```

SPLIT: Split function, can choose "ON" or "OFF".

H TOTAL: LED screen Horizontal total size.

V TOTAL: LED screen Vertical total size.

H POS: This device display image Horizontal size.

V POS: This device display image Vertical size.

H SIZE: This device display image Width setting.

V SIZE: This device display image Height setting.

RESET: If image quality distorts by improper operation, it can be recover by

reset.

ADVANCE: H SIZE, V SIZE, H POS and V POS setting. If image quality

distorts by improper operation, it can be recover by reset.

Save the parameters after setting.

How to Set the Size and Position of the Single Image

Push the [SCALE] button, and enter the scale function menus, the OLED module show as follows:

```
->H SIZE                           1920
   V SIZE                          1080
   H/V SIZE                           0
   H POS                              0
```

```
->H POS                               0
   RESET
```

User can adjust the following items by the knob or number buttons.

H SIZE: Width setting.

V SIZE: Height setting.

H/V SIZE: Width and height equal proportion scale setting.

H POS: Horizontal phase setting.

V POS: Vertical phase setting.

RESET: If image quality distorts by improper operation, it can be recover by reset.

How to Choose and Custom Output Resolution

Choose standard resolution:

Push the [MENU] button to enter the menu items, turn the knob and choose <OUTPUT>, push the knob to confirm, turn the knob to choose <STANDARD>, push the knob to confirm, turn the knob again to choose the output resolution according to actual need.
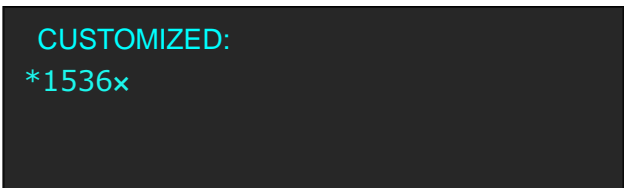
Customized resolution setting:

Push the [MENU] button to enter the menu items, turn the knob and choose <OUTPUT>, push the knob to confirm, turn the knob to choose <CUSTOMIZED>, push the knob to confirm.
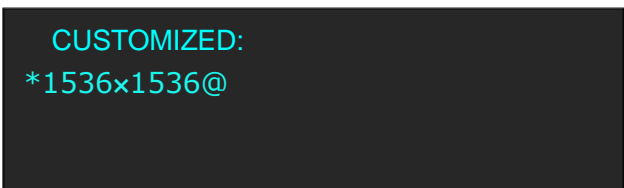
```
 CUSTOMIZED:
->1920×1080@60
```

Turn knob on each digital position, and change the value of the digital by the digital buttons on the front panel. For example, input 1536 as following:

```
 CUSTOMIZED:
*1536×
```

After the digital, push Knob will add *, means before the * is the horizontal size. Same operation for vertical size, for example input1536 as following:
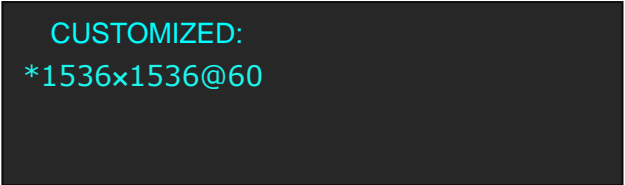
```
 CUSTOMIZED:
*1536×1536@
```

6. System Setup and Operation
How to Choose and Custom Output Resolution

After the digital, push the knob will add @, means before the @ is the vertical size, and after the @ is the refresh rate. Only digital 50 or digital 60 supports for the refresh rate. Use the digital buttons to finish the settings, For example, input refresh rate 60.

```
CUSTOMIZED:
*1536x1536@60
```

After input all the values, push knob to enable VENUS X1 to output this resolution. VENUS X1 will take 5~10 seconds to enable this output resolution.

Note

All the resolution inside the value 2048 x 1152 x 60 = 141557760 can support.
For example:
1) 1536x1536x60=141557760 is OK.
2) 2560x1536x60=235929600 is too big, can not support.
3) 2560x1152x50 is OK.

How to Realize the Screen Size Setting

VENUS X1 supports the screen parameters to meet the requirement where user want to switch between scale screen size and full display size (like monitor). This is only enable for a single display window. Following is an example of a screen size is1408 x 832.

Operator can defined the VENUS X1 output resolution from standard output resolution list or customized the output resolution which is higher than 1408 x 832. For this application 1440x900 is an example:

Push the [MENU] button to go into the main menu, turn the knob and choose <OUTPUT>, push the knob to confirm, turn the knob to choose <SCREEN PARAMETERS>, push the knob and goes into the SCREEN PARAMETERS menus as following:

H SIZE--Horizontal pixels, turn the knob or use the digital button to input the value1408.

V SIZE--Vertical pixels, turn the knob or use the digital button to input the value 832.

H POS--Horizontal position, default value is 0, set the value as the way of H SIZE and V SIZE.

V POS--Vertical position, default value is 0, set the value as the way of H SIZE and V SIZE.

MODE-- Mode option, choose SCREEN SIZE.

SCREEN FOLLOW SCALE--User can enable or disable this function. When choose "ON", the size of the screen will change according to scale setting

RESET: If image quality distorts by improper operation, it can be recover by reset.

6. System Setup and Operation

How to Realize the Screen Size Setting

SCREEN SIZE ← FS → FULL SIZE

How to Zoom the Image

The image can be zoom in horizontal or vertical separately, to meet the special effects required.

Push the [MENU] button to go into the menu items, turn the knob and choose <INPUT>, push the knob to confirm. Turn the knob, and choose <ZOOM>, show the menus as following:

V UP--Zoom in vertical and the image will be zoom in to the top direction from its bottom.

V DOWN--Zoom in vertical and the image will be zoom in to the down direction from its top.

V UP/DOWN--Zoom in vertical but in both top and down direction from its middle.

H LEFT--Zoom in horizontal and the image will be zoom in to the left direction from its right.

H RIGHT--Zoom in horizontal and the image will be zoom in to the right direction from its left.

H LIFT/RIGHT--Zoom in horizontal but in both left and right direction from its middle.

CENTER--Zoom in 4 corner direction from center.

How to Realize the Text Overlay Setting
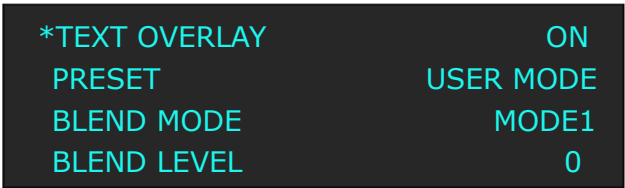
Before setting the text overlay, please make sure the input channel of the text. For example, set VGA input as the text channel. Then make sure the channel that the text will overlay, for example, overlay the text on DVI channel. The operations are as follows:

1. Push the VGA button to make sure there is VGA input.

2. Push the DVI button to make sure there is DVI input.

3. Push the [MENU] button, turn the knob, choose <PICTURE>, push the knob to confirm, turn the knob, and choose <TEXT OVERLAY>, push the knob to confirm.
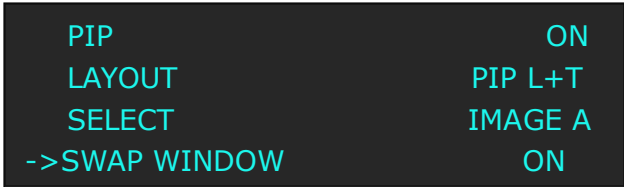
```
  IMAGE QUALITY              >>
  ->TEXT OVERLAY             >>
```

Then enter into TEXT OVERLAY menu items, turn the knob, and choose <TEXT OVERLAY>, push the knob to confirm, turn the knob again, and choose "ON" to enable the text overlay function.

```
 *TEXT OVERLAY              ON
  PRESET              USER MODE
  BLEND MODE              MODE1
  BLEND LEVEL                 0
```

4. Make sure VGA input is IMAGE B, and DVI input is IMAGE A, if not, choose <SWAP WINDOW> option by push [PIP/DSK] button, and choose "ON" for <SWAP WINDOW>.

```
  PIP                        ON
  LAYOUT                PIP L+T
  SELECT                IMAGE A
  ->SWAP WINDOW              ON
```

6. System Setup and Operation
How to Realize the Text Overlay Setting

5. Choose the VGA image in "IMAGE B" in <SELECT> option by pushing

<PIP/DSK> button, and push [SCALE] button to adjust the size and

position of VGA image, then set the VGA image to the required position.

```
->H SIZE                     1920
  V SIZE                     1080
  H/V SIZE                      0
  H POS                         0
```

```
->V POS                         0
  RESET
```

The standard position and size is: ensure the VGA image overlay on the

DVI image, display normally and without black edges. If there are black

edges around VGA image, choose <ZOOM> option in <INPUT> to

adjust.

6. Set the text overlay mode: choose <PRESET> option in <TEXT

OVERLAY>, push the knob to enter into the <PRESET> menu items.

Turn the knob to choose the preset mode, for example, set the VGA text

as WhOnBk, choose WhOnBk1 or WhOnBk2 (Note: Text Overlay only

support monochrome subtitles), user can also adjust the <BLEND

MODE> or <BLEND LEVEL> to get a better effect.

```
  TEXT OVERLAY               ON
->PRESET               WhOnBk2
  BLEND MODE              MODE1
  BLEND LEVEL                 0
```

7. Push the [SAVE/1] button to save the above parameters.

How to User Define the BLACK Key

System default the [BLACK] button as black function. Push the button, its

LED light turns on, the output will be switched to black, push the button

again, its LED light is off, and output the video image.

For more details, please refer to: How to Use Black Out.

Besides BLACK, user can define this button as FREEZE, TEST PATTERN

and BRIGHT, the operations are as follows:

1. Push the [MENU] button to enter to the menu items, turn the knob, and

    choose <SYSTEM>:

```
->SYSTEM                    >>
  LANGUAGE/语言            ENG
  FACTORY RESET            >>
```

2. Push the knob to confirm, turn the knob, and choose <USER DEFINED

    BUTTON>:

```
  DEVICE STATUS             >>
->USER DEFINED BUTTON       >>
  OLED LUMINANCE            13
  FAN CONTROL               >>
```

3. Push the knob to confirm, turn the knob, and choose <BLACK KEY>:

```
->BLACK KEY                BLACK
  SCALE KEY                SCALE
```

4. Push the knob to confirm, turn the knob, and choose <FREEZE>, <TEST

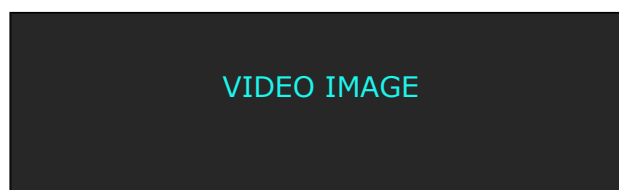   PATTERN> or <BRIGHT>, push the knob to confirm.

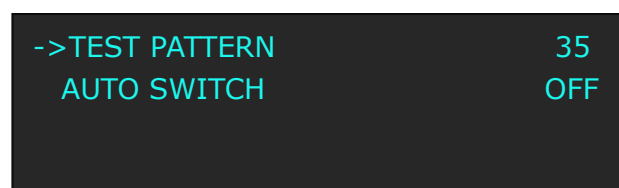# 6. System Setup and Operation

How to User Define the BLACK Key

```
->BLACK KEY              FREEZE
   SCALE KEY             SCALE
```

(1) If choose <FREEZE>, push the button, its LED light turns on, and

freeze the image.

```
              FREEZE IMAGE
```

Push the button again, its LED light is off, and output the video image.

```
              VIDEO IMAGE
```

(2) If choose <TEST PATTERN>, push the button, its LED light turns

on, the output will be switched to test pattern.

```
->TEST PATTERN             35
   AUTO SWITCH            OFF
```

There are 66 kinds of test patterns. If choose <AUTO SWITCH>,

VENUS X1 will output all the test patterns one by one, and the interval

between is 1 to10S.

Push the button again, its LED light is off, and output the video image.

```
              VIDEO IMAGE
```
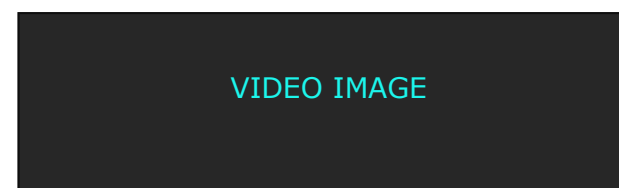
6. System Setup and Operation

How to User Define the BLACK Key

    (3) If choose <BRIGHT>, push the button, its LED light turns on,

       user can adjust the brightness, contrast, saturation, sharpness, color

       red, color green, color blue and gamma. If image quality distorts by

       improper operation, it can be recover by reset.

```
->BRIGHTNESS          50
  CONTRAST            50
  SATURATION          50
  SHARPNESS           50
```

```
->COLOR RED           50
  COLOR GREEN         50
  COLOR BLUE          50
  GAMMA           LINEAR
```

```
->RESET
```
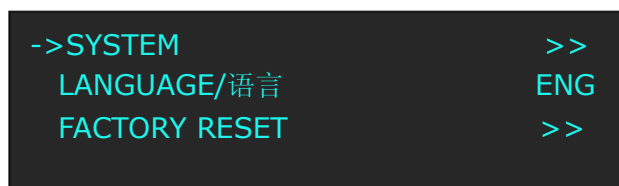
How to User Define the SCALE Key

System default the [SCALE] button as scale function. push the button to enter the scale menu. Turn the knob to select the relevant sub menus. For more details, please refer to: How to Set the Size and Position of the Single Image.

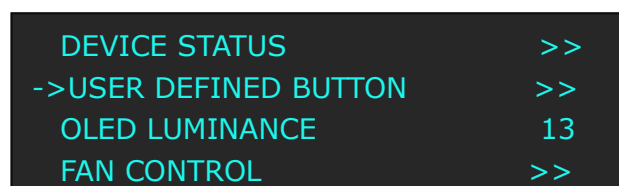Besides SCALE, user can define this button as TAKE, the operations are as follows:

1. Push the [MENU] button to enter to the menu items, turn the knob, and choose <SYSTEM>:

```
->SYSTEM                        >>
  LANGUAGE/语言                 ENG
  FACTORY RESET                 >>
```

2. Push the knob to confirm, turn the knob, and choose <USER DEFINED BUTTON>:

```
  DEVICE STATUS                 >>
->USER DEFINED BUTTON           >>
  OLED LUMINANCE                13
  FAN CONTROL                   >>
```

3. Push the knob to confirm, turn the knob, and choose <SCALE KEY>:

```
  BLACK KEY               BLACK
->SCALE KEY               SCALE
```
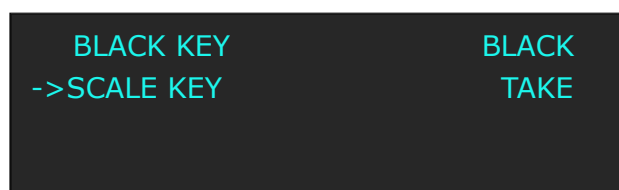
4. Push the knob to confirm, turn the knob, and choose <TAKE>, push the knob to confirm.

6. System Setup and Operation

How to User Define the SCALE Key

```
     BLACK KEY                    BLACK
  ->SCALE KEY                      TAKE
```

5. After define SCALE KEY as TAKE, the SCALE button will light up.

How to Realize the TAKE Mode

1. First, define the [SCALE] key as TAKE. For more details, please refer to:

   How to User Define the SCALE Key.

2. After define SCALE key as TAKE, the SCALE button will light up.

3. Choose the signal that need to take, for example, push [DVI/5], the

   signal button you have selected will flash and the main menu will show

   the TAKE source you have selected.

4. After choose the signal, push the [SCALE] ([TAKE]) button, and the

   signal will be taken to the output.
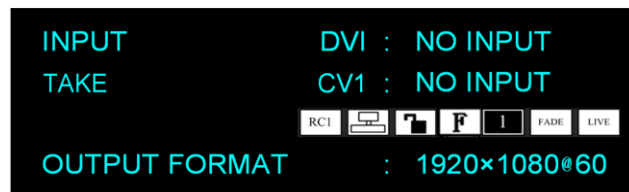
```
INPUT              DVI :  NO INPUT
TAKE               CV1 :  NO INPUT
                  RC1  [ ] [ ] [ F ] [ 1 ]  FADE  LIVE
OUTPUT FORMAT           :  1920×1080@60
```

How to Realize the Special Effects Switching

Push the [MENU] button two times, and enter the effect switch function menus, effect menu shown as follows:

```
->DEINTERLACE              ON
  IMAGE ENHANCE           OFF
  MODE               DISSOLVE
  FADE TIME             0.5s
```

```
->ALPHA                  16
```

DEINTERLACE: Force Deinterlace function, can choose "ON" or "OFF".

ON: Force deinterlace.

OFF: No deinterlace.

IMAGE ENHANCE: Image enhancement function, used for image edge sharpening, color reduction and image scaling.

MODE: Special effects switching modes, including DISSOLVE, CUT, WIPE SOUARE IN, WIPE SOUARE OUT, WIPE TOP LIEFT IN, WIPE TOP LIEFT OUT, WIPE TOP RIGHT IN, WIPE TOP RIGHT OUT, WIPE BOTTOM LEFT IN, WIPE BOTTOM LEFT OUT, WIPE BOTTOM RIGHT IN, WIPE BOTTOM LEFT OUT, WIPE LEFT IN, WIPE LEFT OUT, WIPE RIGHT IN, WIPE RIGHT OUT, WIPE TOP IN, WIPE TOP OUT, WIPE BOTTOM IN and WIPE BOTTOM OUT:

FADE TIME: Switch time setting. Turn the knob to choose the time and push the knob to confirm. The switching time ranges from 0 to 3S.
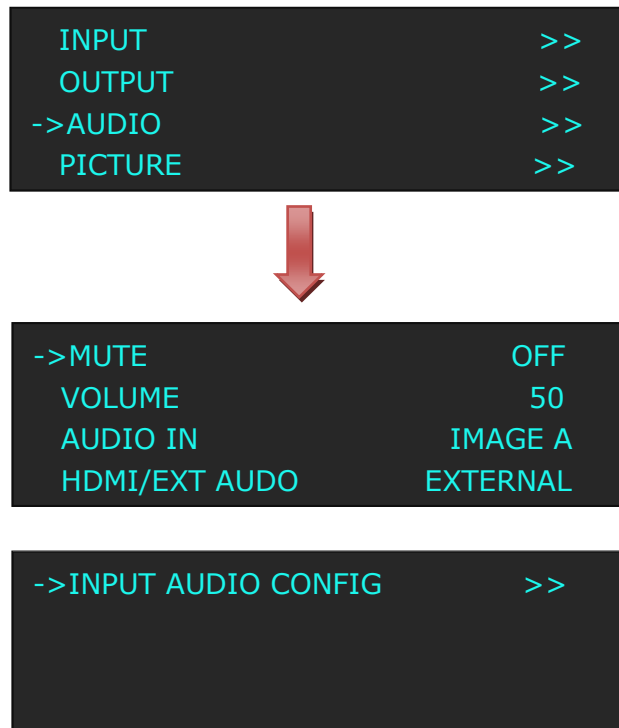
ALPHA: It can set the image transparency, the regulating range is among 0 to 16.

How to Realize the Audio Setting

Push the [MENU] button, the OLED module show the menu items, turn the knob, and choose <AUDIO>, push the knob to confirm.

```
 INPUT                        >>
 OUTPUT                       >>
->AUDIO                       >>
 PICTURE                      >>
```

```
->MUTE                       OFF
  VOLUME                      50
  AUDIO IN                 IMAGE A
  HDMI/EXT AUDO            EXTERNAL
```

```
->INPUT AUDIO CONFIG          >>


```

MUTE: User can enable or disable the mute function.

VOLUME: Volume adjustment, the adjust range is 0~100.

AUDIO IN: Can choose audio input source for IMAGE A or IMAGE B.

HDMI/EXT AUDIO: Choose internal or external audio for HMDI/EXT.

INPUT AUDIO COFIG: The input audio includes: CV1, VGA, DVI, HDMI and M_8_SDI. Input audio 1 can choose any input except the inputs of input audio 2 and input audio 3. Input audio 2 can choose any input except the inputs of input audio 1 and input audio 3. Input audio 3 can choose any input except the inputs of input audio 1 and input audio 2.
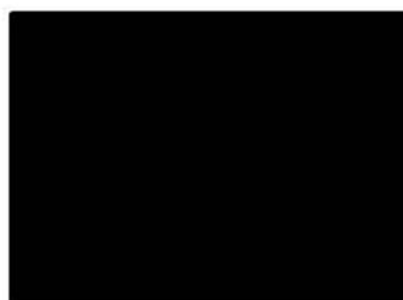
6. System Setup and Operation

How to Use Black Out

Black out descriptions:

Black signal realizes one-key-touch to a black screen.

VENUS X1 provides black effect processing for output with cut black

effect. Operation is as below:

Push the [BLACK/0] button, then output will cut to BLACK, shown as
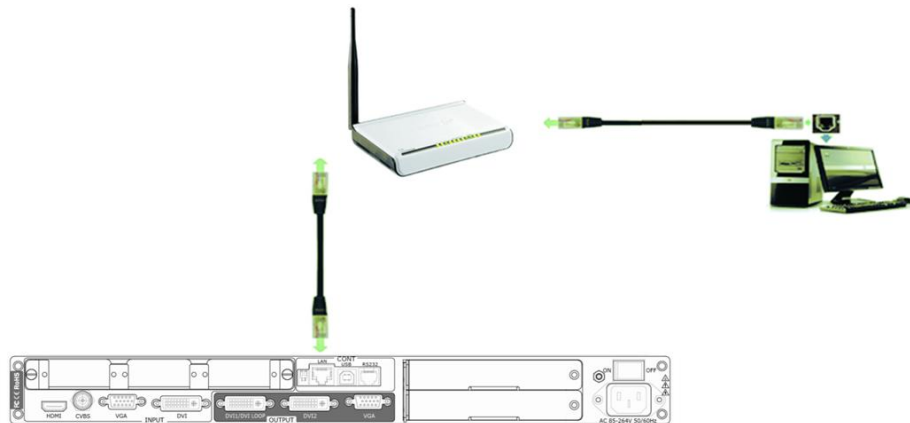
below:

How to Realize LAN Remote Control Settings

Firstly, to realize LAN remote control need to build up a LAN platform including: ①One computer (Laptop or computer, used to do remote control which installed windows control software in the computer, please refer to software installing part for installation software). ②One router (Better to have wireless function which may realize WEB control cross different platform, without wireless function is available but only realize cable remote control. No limitation for router's model and brand, such as VPN router model: Netcore 255 or 266; Volans VE 760W or 982W). ③One VENUS X1 processor (as long as the router's network ports can connect to, user can place multi pieces of VENUS X1).

Step one: LAN physical connection. Connect VENUS X1 and router with network cable, then connect computer and router with network cable also, use the LAN port of router, LAN port is used for connecting to outer net. Sketch map as below:
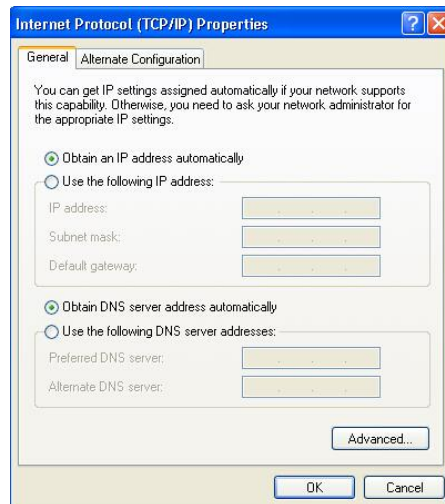

Step two: IP address setting (processor's default IP address is 192.168.0.100)

Firstly change computer's local connection to "automatically getting the IP", showed as below:

6. System Setup And Operation

How to Realize LAN Remote Control Settings

Secondly refer to router's instruction (user manual specification), and find out router's default network segment.

If router's default network segment is 192.168.0.1, then it is same to processor IP address segment, open up windows control software and user can directly control on VENUS X1.

If router's default network segment is 192.168.1.1, then user need to change router's default gateway or change processor's IP, both methods are available, but we suggest to change processor's IP.

Method one: Change processor's IP.

Push the [MENU] button, and go into items as below image shows. Change processor's IP to be 192.168.1.100, confirm and restart the processor, then user can directly control on VENUS X1 via windows control software.

Method two: Change router's gateway.

Type in 192.168.1.1 on the browser and go into router setting.

Type in default account and code (please refer to the router user manual for the information).

6. System Setup And Operation
How to Realize LAN Remote Control Settings

Go to router setting part and find out "LAN port setting", change the default value
"192.168.1.1" to be "192.168.0.1".

Save the setting and restart the router, then user can directly control on VENUS X1 via
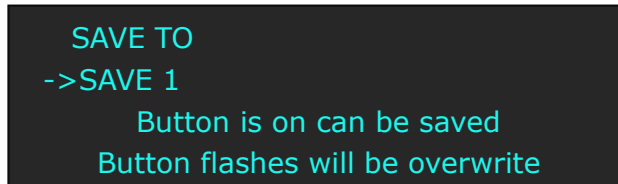windows control software.
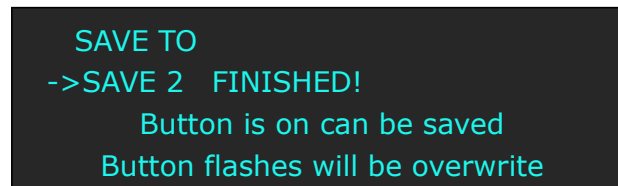
How to Save the Parameter

VENUS X1 provides 36 save preferences, operations are as follows:

1. Push the [SAVE/1] button, the button light is on, and enable the SAVE

function.

```
   SAVE TO
->SAVE 1
         Button is on can be saved
         Button flashes will be overwrite
```

2. Turn the knob, and choose the position that will save, push the knob

to confirm.

3. The figure: 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 down of the buttons means

SAVE1~10, user can push any button on to save. For example, save to

SAVE 2, push button 2, the OLED panel will show as follows after

saving.

```
   SAVE TO
->SAVE 2   FINISHED!
         Button is on can be saved
         Button flashes will be overwrite
```

4. Push the [SAVE/1] button again, the button light is off, and disable the

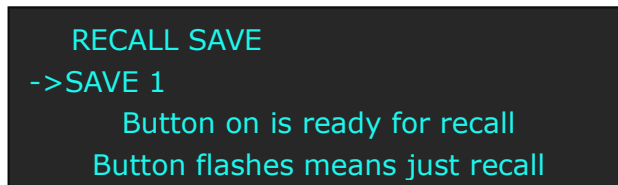SAVE function.

6. System Setup and Operation

How to Load the Saved Parameter

VENUS X1 provides 36 save preferences, operations are as follows:

1. Push the [LOAD/6] button, the button light is on, and enable the LOAD function.

```
   RECALL SAVE
->SAVE 1
      Button on is ready for recall
      Button flashes means just recall
```

2. Turn the knob, and choose the position that will load, push the knob to confirm.

3. Push the [LOAD/6] button again, the button light if off, and disable the LOAD function.

7. Common Questions and Solutions

In This Chapter

This chapter provides the common questions and solution for the video

processor. The following topics are provided:

- Input Jitter for I System of HDMI

- DVI Quick Split Operation

- There is Flash Point when Output to the LED Screen

- APP Software cannot Properly Connected in Mobile Phone or Tablet Computer

- VGA Input Offset or can't be Full Size Shown

- HDMI, DVI Input Offset or cannot be Full Size Shown

- Software Upgrade Failed

7. Common Questions and Solutions

Input Jitter for I System of HDMI

Change the Input as P System

Some HDMI input of VENUS X1 will jitter for the I system of HDMI, please change the input as P system.

Connect the HDMI Signal to the EXT_HDMI Input

If user can't change the input format as P system, please connect the I system signal to the EXT_HDMI input.

DVI Quick Split Operation

The split function of VENUS X1 is only available for DVI port (standard) and HDMI loop out port of EXT_9.

It Needs Signal Distributor if Split by DVI Port

If split by the standard DVI port, it needs the signal distributor to achieve the synchronization cascade, as there is no DVI loop.

Split by the HDMI Loop Out Port of EXT_9

User can split by the HDMI loop of EXT_9, as there is loop out port on this module.

Quick Split

Connect all the inputs and outputs, then push the [SPLIT] buttons on all the

7. Common Questions and Solutions

video processors. Choose fixed split or normal split, and open the split

function.

1. FIXED SPLIT: Set the horizontal split and vertical split according to

   actual need.

2. NORMAL SPLIT: Set the H TOTAL, V TOTAL, H POS, V POS, H SIZE

   and V SIZE according to actual need. User can do the quick split only

   need setting three groups of the parameters.

There is Flash Point when Output to the LED Screen

Change the DVI Cable

There is flash point on LED display when input sending card. This is

because the DVI cable quality of good and bad are intermingled. Please

change the DVI cable and test again.

Change the DVI Output Port

The DVI output port is loose or oxidation due to plug and pull frequently or

long time no use, which may cause the signal attenuation. There are two

DVI output ports on VENUS X1, please change to the other DVI output port

and test again.

7. Common Questions and Solutions

APP Software cannot Properly Connected in Mobile Phone or Tablet Computer

Confirm if Open the Ethernet Function

Confirm if the second icon on the OLED module is @, if not, the ethernet function of device is not open. Push the [MENU] button, then choose <SYSTEM>, turn the knob and choose <ETHERNET>, set the <NETWORK> as "ON" in the submenus.

Confirm if IP Conflict for Mobile Phone, Wireless Router and Device

System default the device IP is 192.168.0.100, please check if the IP of wireless router is inconsistent with this IP, the IP will conflict if consistent, and unable to search the device and normal connection. Please change the device IP address, and make sure it is in the same network segment.

VGA Input Offset or cannot be Full Size Shown

Set Auto Adjust for VGA Input

Long push the [VGA] button and enter to the <VGA ADJUST>, the auto adjust time is about 10 seconds. Or push the [MENU] button, then choose <INPUT>, turn the knob and choose <VGA ADJUST>, push the knob to confirm. Turn the knob and choose <AUTO ADJUST>, the auto adjust time is about 10 seconds. If auto adjust cannot solve the problem, please manually adjust in <VGA ADJUST>.

7. Common Questions and Solutions

HDMI, DVI Input Offset or cannot be Full Size Shown

Manual Adjust the HDMI, DVI and EXT HDMI, EXT DVI

Push the [MENU] button, then choose <INPUT>, turn the knob and choose <DVI/EXT ADJUST>, push the knob to confirm. Turn the knob to adjust the H POS and V POS.

Software Upgrade Failed

Can't Open the Device

Check if connect to the USB port, and then check if recognize to the port, if so, please restart the PC and try to update again.

Failed when Upgrade Less than 100%

Write the 100M BOOT program in the program folder, after write successfully, write the 100M MCU program, and upgrade the complete program package finally.
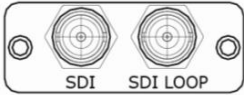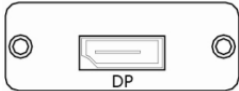
A. Specification
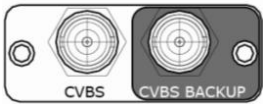
RGBlink

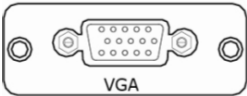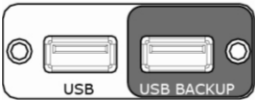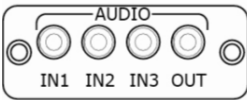| CVBS Input (Standard)	
Number of Inputs	1
Connector	Standard BNC Socket
Supported Standards	PAL/NTSC
Signal Level	1Vpp±3db （0.7V Video+0.3v Sync) 75 ohm
Multiplex	480i,576i
VGA Input (Standard)	
Number of Inputs	1
Connector	Standard DB15 Socket
Supported Standard	VGA-UXGA
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB （0.7V Video+0.3v Sync) 75 ohm black level: 300mV Sync-tip: 0V
Supported Resolution	VGA-UXGA （800 × 600@60 ｜ 1024 × 768@60 ｜ 1280 × 1024@60｜1440×900@60｜1600×1200@60)
DVI Input (Standard)	
Number of Inputs	1
Connector	Standard DVI-I socket
Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60｜1080i50/59.94/60, 720p50/59.94/60 VESA：800×600@60｜1024×768@60｜1280×768@60｜1280×1024@60｜1600×1200@60｜1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
HDMI Input (Standard)	
Number of Inputs	1
Connector	Standard HDMI-A socket
Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60｜1080i50/59.94/60 720p50/59.94/60 VESA：800×600@60｜1024×768@60｜1280×768@60｜1280×1024@60｜1600×1200@60｜1920×1080@60
Signal Level	TMDS pwl,single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
DVI Loop Out (Standard)	
Number of Loop Out	1

Connector	Standard DVI-I socket
Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60,1080i50/59.94/60, 720p50/59.94/60 VESA：800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
DVI Output (Standard)	
Number of Outputs	2
Connector	Standard DVI-I Socket
Signal Level	TMDS pw, 165MHz bandwidth
Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60, 720p50/59.94/60 1280×720@23.98 I 1280×720@24 I 1280×720@25 I 1280×720@29.97 I 1280×720@30 I 1920×1080@23.98 I 1920×1080@24 I 1920×1080@25 I 1920×1080@29.97 I 1920×1080@30 VESA: 800×600@60 I 1024×768@60 I 1024×768@75 I 1280×720@60 I 1280×720@50 I 1280×768@60 I 1280×800@60 I 1280×1024@60 I 1360×768@60 I 1366×768@60 I 1400×1050@60 I 1440×900@60 1600×1200@60 I 1680×1050@60 I 1920×1080@60 I 1920×1080@50 I 1920×1200@60 I 2048×1152@60 I 2560×812@60 I 2560×816@60 I 1536×1536@60
VGA Output (Standard)	
Number of Outputs	1
Connector	Standard DB15 Socket
Supported Resolution	VESA: 800×600@60 I 1024×768@60 I 1024×768@75 I 1280×720@60 I 1280×720@50 I 1280×768@60 I 1280×800@60 I 1280×1024@60 I 1360×768@60 I 1366×768@60 I 1400×1050@60 I 1440×900@60 I 1600×1200@60 I 1680×1050@60 I 1920×1080@60 I 1920×1080@50 I 1920×1200@60 I 2048×1152@60 I 2560×812@60 I 2560×816@60 I 1536×1536@60
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm black level: 300mV Sync-tip: 0V
3G-SDI Input (SDI optional module)	

Interface Appearance	
Board Size	52(L)×19.5(W)（mm）
3G-SDI Input	
Number of Inputs	3
Connector	Standard BNC Socket
Data Rate	2.97Gb/s, 2.97/1.001Gb/s, 1.485Gb/s, 1.485/1.001Gb/s and 270Mb/s
Supported Standard	SMPTE 425M - 3G Level A and Level B Formats
Supported Resolution	SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1) Ɩ 1920×1080/50 (1:1). SMPTE 425M (3G Level B DS1 and DS2) 4:2:2： 1920×1080/60 (2:1) Ɩ 1920×1080/50 (2:1) SMPTE 296M (HD): 1280×720/50 (1:1) Ɩ 1280×720/50 (1:1) SMPTE 125M (SD): 1440×487/60 (2:1) Ɩ 525-line 487 generic SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1), 625-line generic.
Balance	Belden 1694A cable: 150m at 2.97Gb/s 250m at 1.485Gb/s 480m at 270Mb/s
SDI Loop Out	
Number of Loop Out	3
Connector	Standard BNC Socket
Data Rate	2.97Gb/s, 2.97/1.001Gb/s, 1.485Gb/s, 1.485/1.001Gb/s and 270Mb/s
Supported Standard	SMPTE 425M - 3G Level A and Level B Formats
Supported Resolution	SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1) Ɩ 1920×1080/50 (1:1). SMPTE 425M (3G Level B DS1 and DS2) 4:2:2： 1920×1080/60 (2:1) Ɩ 1920×1080/50 (2:1) SMPTE 296M (HD): 1280×720/50 (1:1) Ɩ 1280×720/50 (1:1) SMPTE 125M (SD): 1440×487/60 (2:1), 525-line 487 generic SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1), 625-line generic.
Balance	Belden 1694A cable: 150m at 2.97Gb/s 250m at 1.485Gb/s 480m at 270Mb/s
DVI IN+DVI LOOP (DL optional module)	

Interface Appearance	
Board Size	104.5(L)×19.5(W)（mm）
DVI Input	
Number of Inputs	1
Connector	Standard DVI-I socket
Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60, 720p50/59.94/60 VESA：800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
DVI Loop out	
Number of Loop Out	1
Connector	Standard DVI-I socket
Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60,1080i50/59.94/60, 720p50/59.94/60 VESA：800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
DP Input (DP optional module)	
Interface Appearance	
Board Size	52(L)×19.5(W)（mm）
Number of Inputs	1
Connector	Standard
Supported Resolution	Support resolution: WQXGA + (1920 x 1200), and color depth: 30/36 bit (each primary 10/12 bit)
Supported Bandwidth	10.8Gb/s
Format Standard	DP1.0
HDMI IN+HDMI LOOP (HL optional module)	
Interface Appearance	
Board Size	52(L)×19.5(W)（mm）
HDMI Input	

Number of Inputs	3
Connector	Standard HDMI-A socket
Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60, 720p50/59.94/60 VESA：800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
HDMI Loop Out	
Number of Loop Out	3
Connector	HDMI standard type A interface
Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60, 720p50/59.94/60 VESA：800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60
Format Standard	HDMI 1.3
DVI Input (DVI optional module)	
Interface Appearance	
Board Size	52(L)×19.5(W)（mm）
Number of Inputs	3
Connector	Standard DVI-I socket
Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60, 720p50/59.94/60 VESA：800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
CVBS Input (CVBS optional module)	
Interface Appearance	
Board Size	52(L)×19.5(W)（mm）
Number of Inputs	3
Connector	Standard BNC Socket
Supported Standards	PAL/NTSC
Signal Level	1Vpp±3db （0.7V Video+0.3v Sync) 75 ohm

Multiplex	480i,576i
VGA Input (VGA optional module)	
Interface Appearance	 VGA
Board Size	52(L)×19.5(W)（mm）
Number of Inputs	3
Connector	Standard DB15 Socket
Supported Standard	VGA-UXGA
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB （0.7V Video+0.3v Sync) 75 ohm black level: 300mV Sync-tip: 0V
Supported Resolution	VGA-UXGA （800 × 600@60 I 1024 × 768@60 I 1280 × 1024@60 I 1440×900@60 I 1600×1200@60）
USB Input (USB optional module)	
Interface Appearance	 USB USB BACKUP
Board Size	52(L)×19.5(W)（mm）
Number of Inputs	3
Connector	Standard USB port
Supported Standard	Support general Image and video formats
Audio Input (Audio optional module)	
Interface Appearance	 IN1 IN2 IN3 OUT
Board Size	52(L)×19.5(W)（mm）
Audio Input	
Number of Inputs	3
Connector	Standard RCA Socket
Audio Standard	48Kbps 24bit
Audio Output	
Number of Outputs	1
Connector	Card faucet , Standard 1/4 Socket
Audio standard	48Kbps 24bit
Function	
Input channel configuration	Support each input channel signal programming configuration
PIP	Support PIP、PBP for any two inputs
Transition effects	Fade in and fade out switching between any two inputs
Extras	
Communication	RS232 USB TCP/IP

Power Supply	85-264V IEC-3
Working Environment	0°C~45°C
Stored Environment	10% to 90%
Product Warranty	3 years parts and labor warranty

B. Contact Information

RGBlink

Warranty:

All video products are designed and tested to the highest quality standard and backed by a full 3 years parts and labor warranty. Warranties are effective upon delivery date to customer and are non-transferable. RGBlink warranties are only valid to the original purchase/owner. Warranty related repairs include parts and labor, but do not include faults resulting from user negligence, special modification, lighting strikes, abuse(drop/crush), and/or other unusual damages.

The customer shall pay shipping charges when unit is returned for repair.

Headquarter: S603~604 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen, Fujian Province, P.R.C

- **Tel:** +86-592-5771197
- **Fax:** +86-592-5771202
- **Customer Hotline:** 4008-592-315
- **Websites:**
    - ~ http://www.rgblink.com
    - ~ http://www.rgblink.cn

- **E-mail:** support@rgblink.com

C. Software Upgrade

The upgrade steps are as follows:

(1) Connect the USB interface of VENUS X1 to the computer with a USB cable.
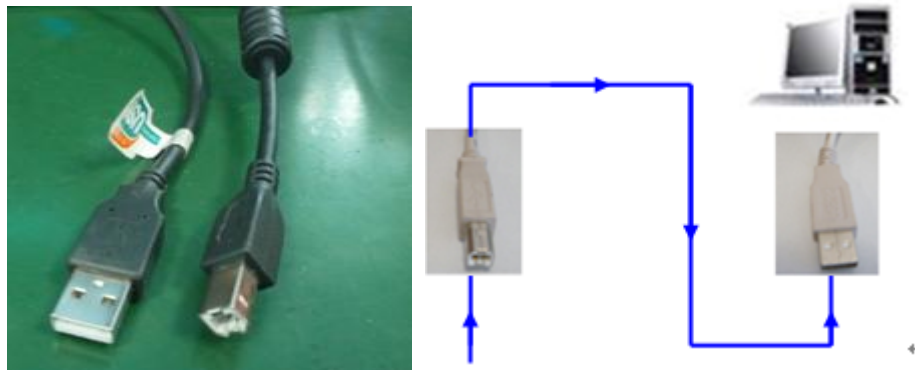
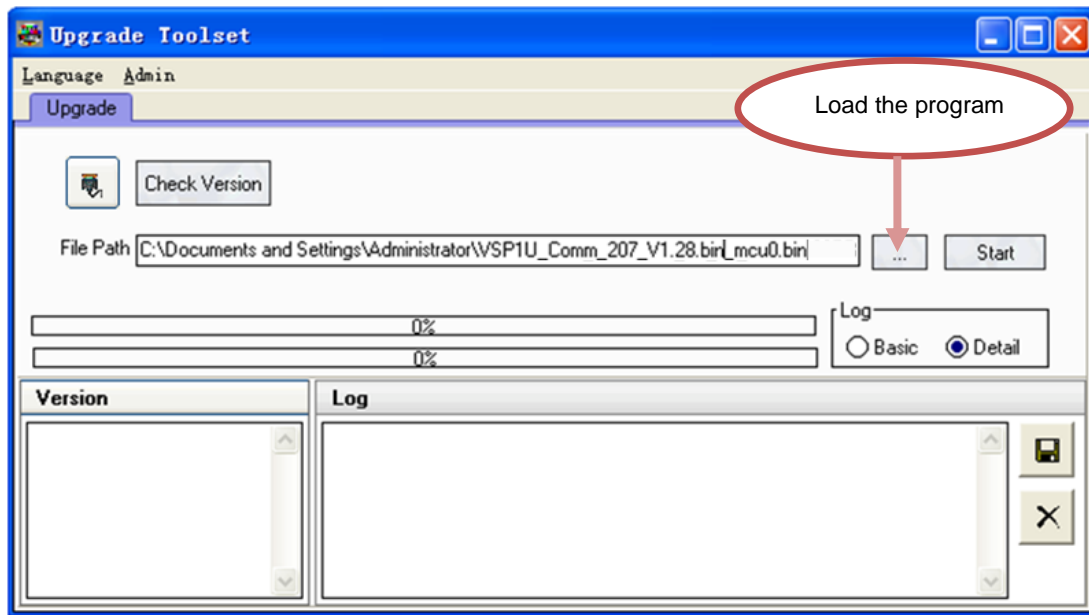(2) Plug in the power cord, and make sure the device is in normal operation.

(3) Open the windows control program .

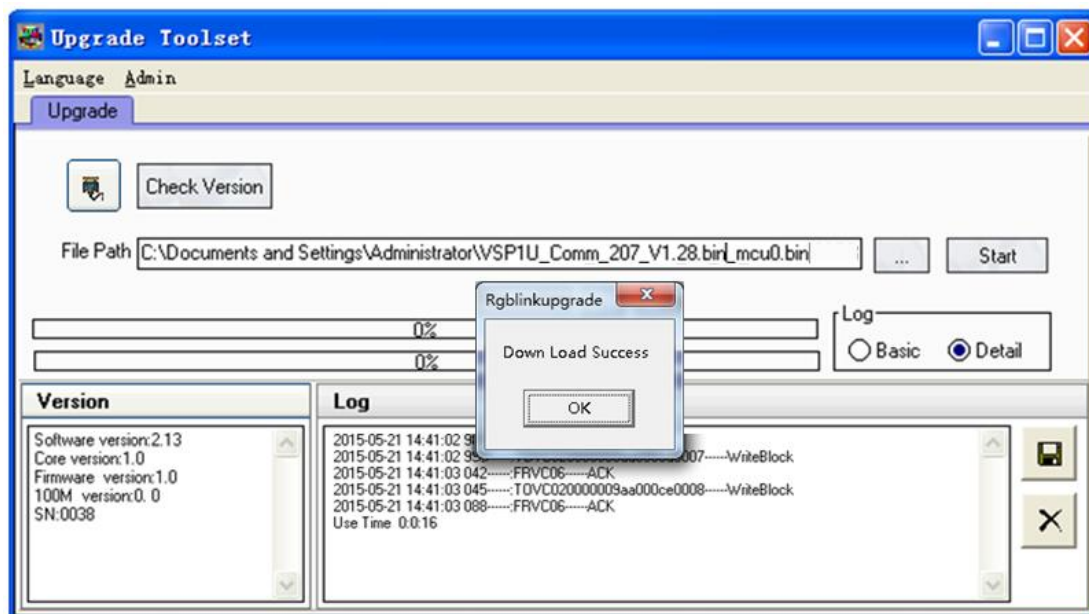(4) Click the icon to set the serial port, shown as follow:
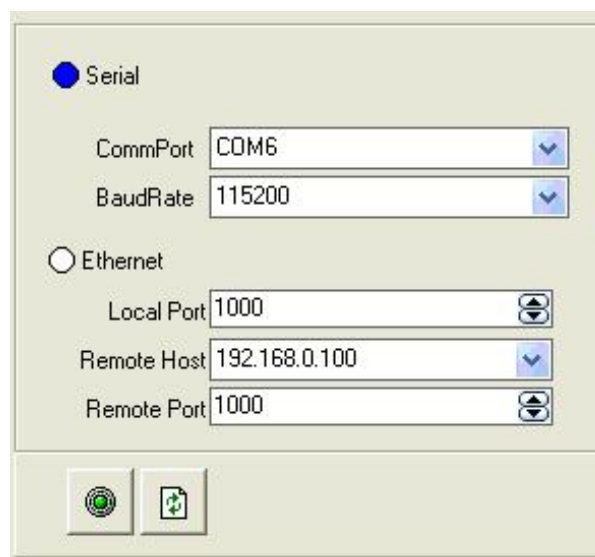
(5) Load the program in the file path, then click "Start".

(6) It will pop up the following box if load successfully, or user need to re-download.

(7) Reboot the device, and check the run state and version information.

D. Optional Module Installation and Replacement Instruction

VENUS X1 is based on replaceable input optional modules structure, user can install or replace the optional module according to actual need, specific steps are as follows:

Install the Optional Module

1. Unscrew the 2 captive screws in input modules block, and pull out the input module block, as shown in figure:
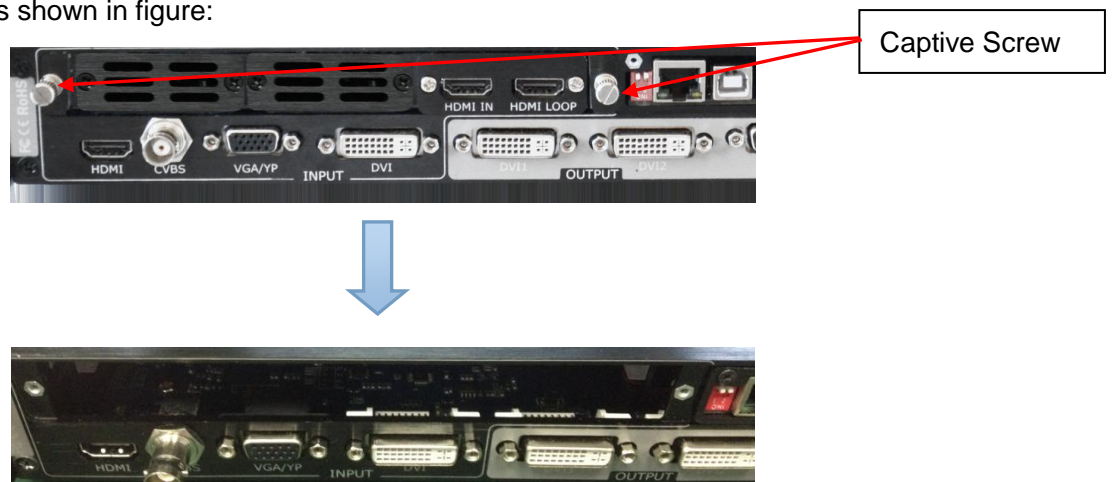
Captive Screw

2. Fix the input EXT board and input modules on the plate with the fixed screws, as shown in figure:

Fixed screw of input module
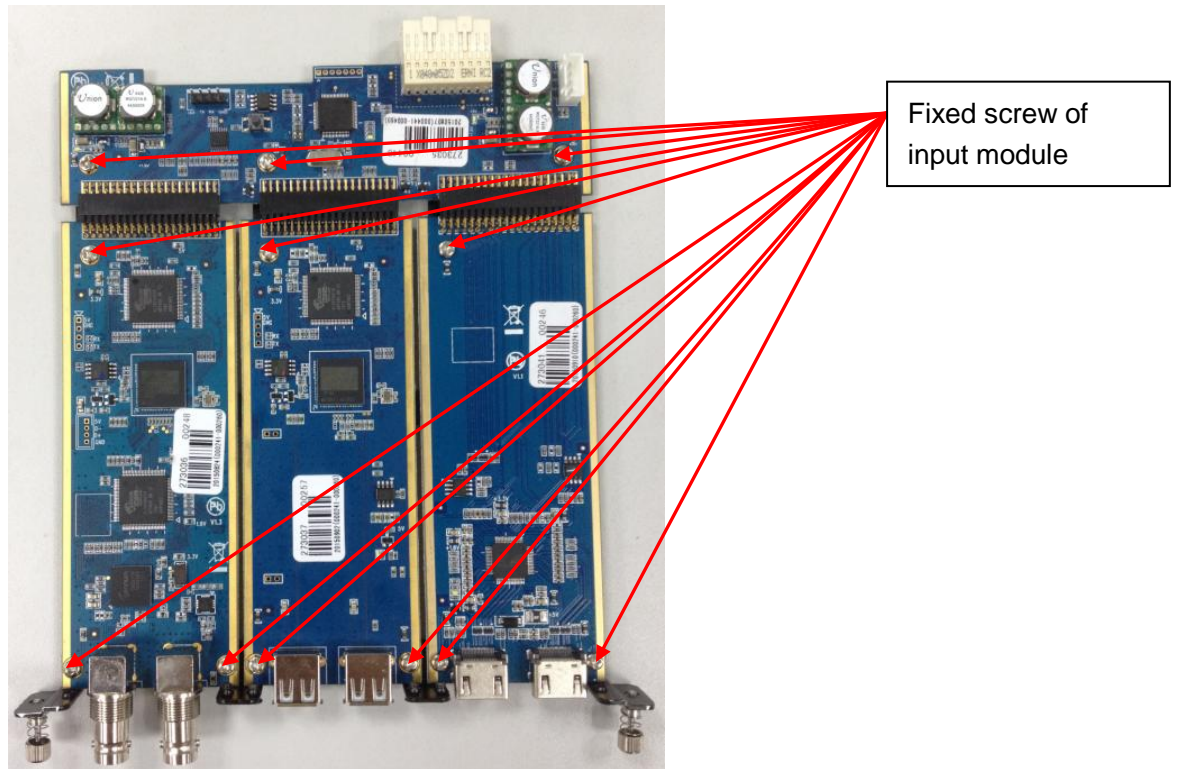
3. Push the input modules into the device along the slide rail, and screw the captive

screws, then install the input blocks, as shown in figure:

4. If install the SDI input module, please screw the SDI interface, as shown in figure:

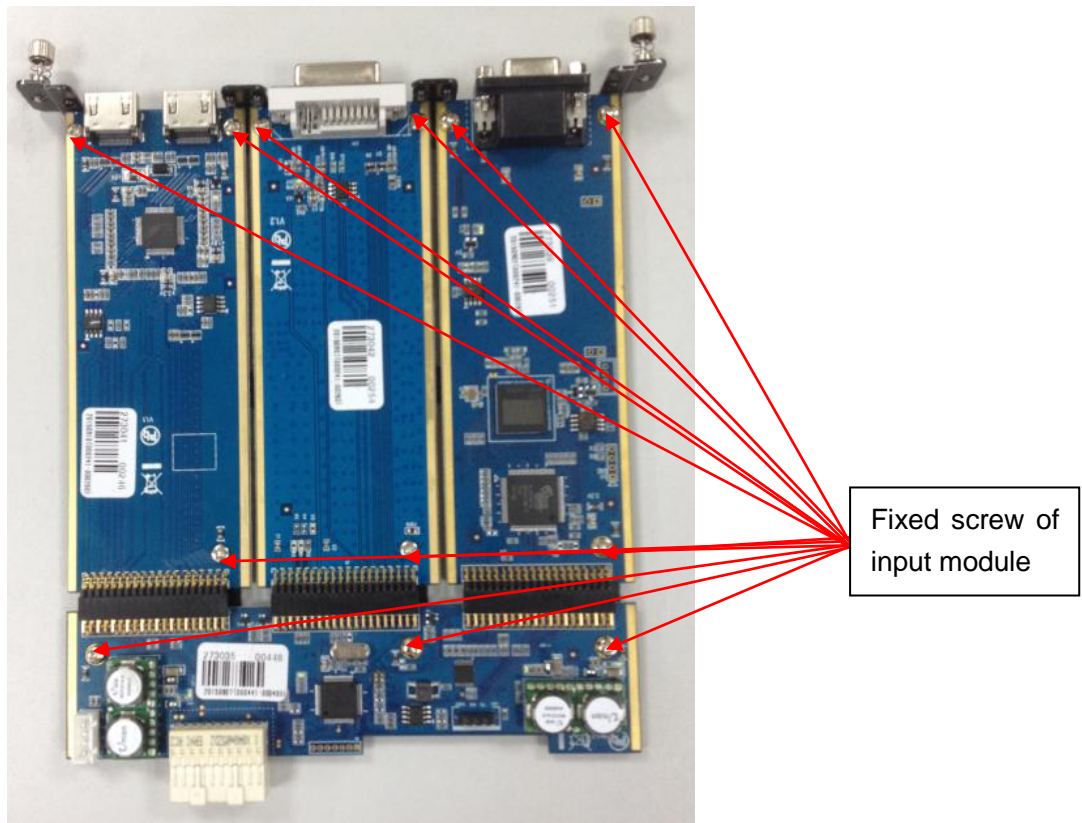5. Lock the input blocks, as shown in figure:

Replace the Optional Module

1. Unscrew the captive screws, and pull out the input modules that will replace, as
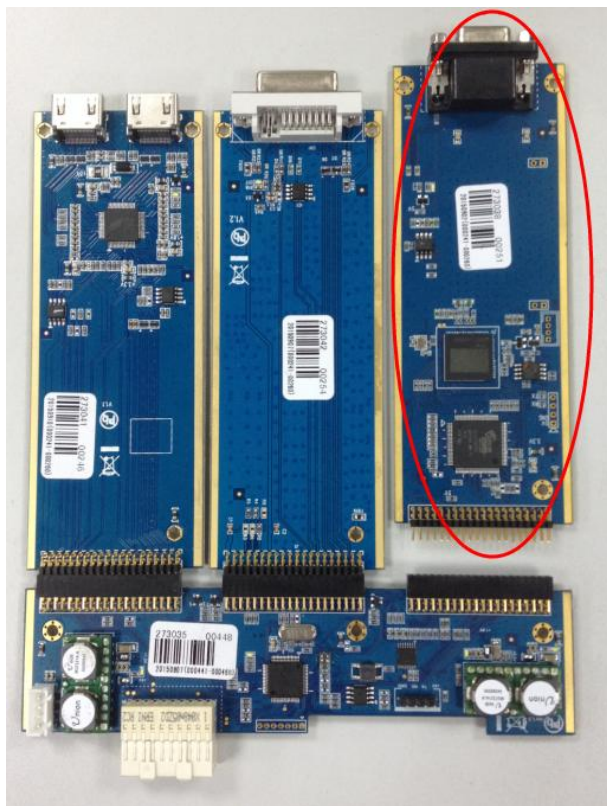
   shown in figure:


```
Captive Screw
```

2. Unscrew the fixed screws of input module, as shown in figure:
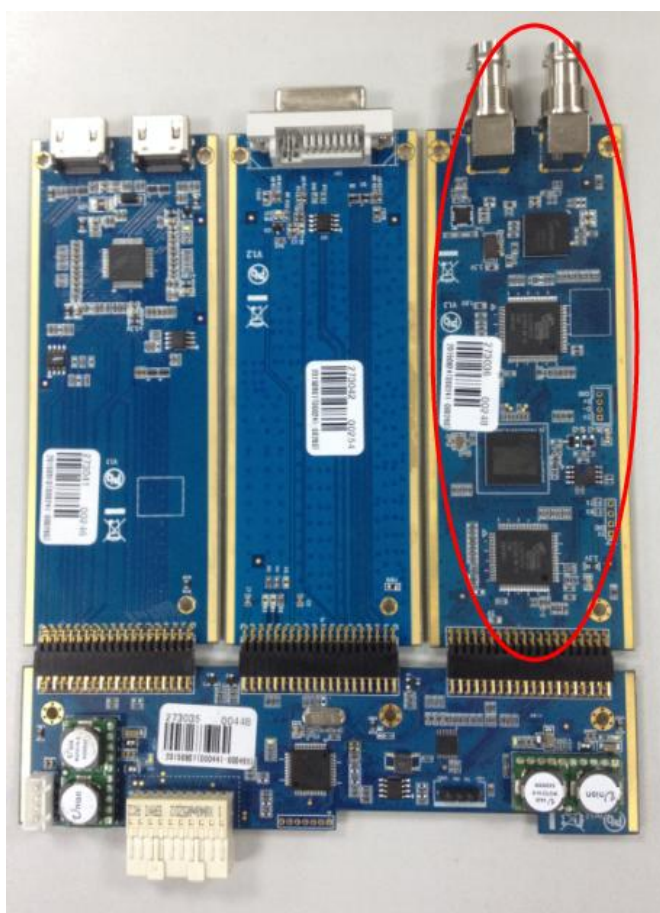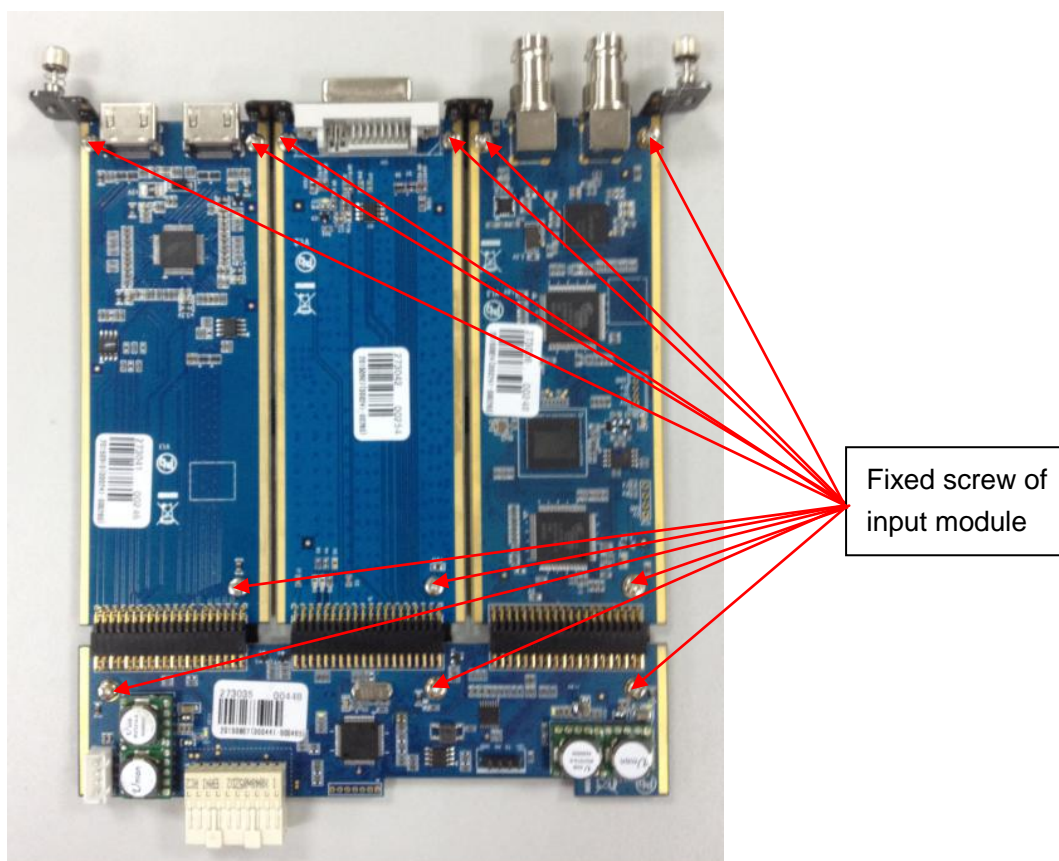
Fixed screw of input module

3. Take out the input modules that will replace, as shown in figure:

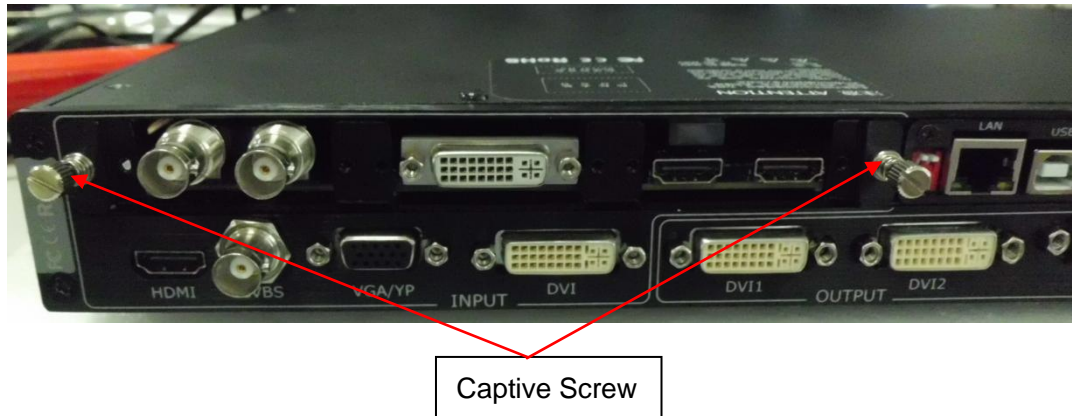4. Install the input module that user need, as shown in figure:

5. Fix the input modules on the plate with screws, as shown in figure:

Fixed screw of input module

6. Push the input modules into the device along the slide rail, and screw the captive

screws, as shown in figure:

Captive Screw

7. Lock the input block, as shown in figure:

E. VENUS X1 Connect APP Control Operation

1. Connection

Connect the VENUS X1 to any LAN port of the wireless router via a network cable. The LAN port are marked with the red box.
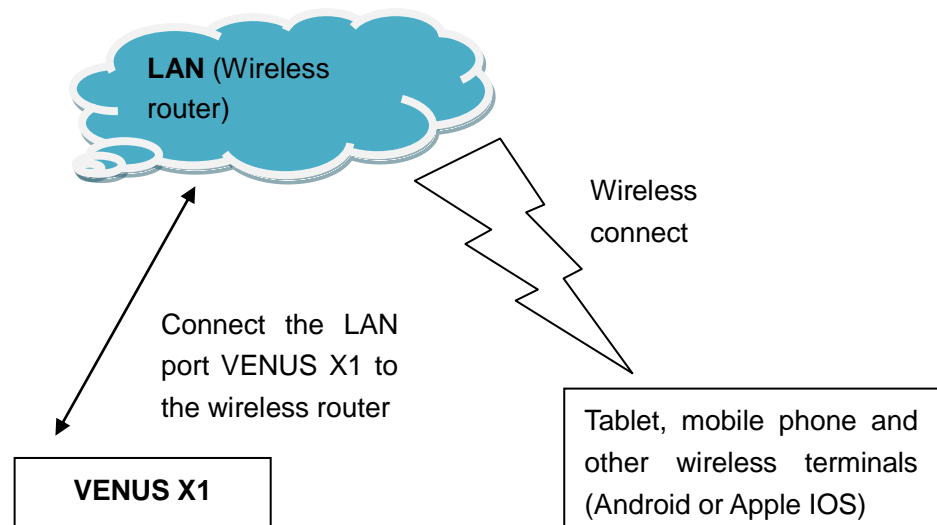

Shown in the figure below (connect from the left to right).
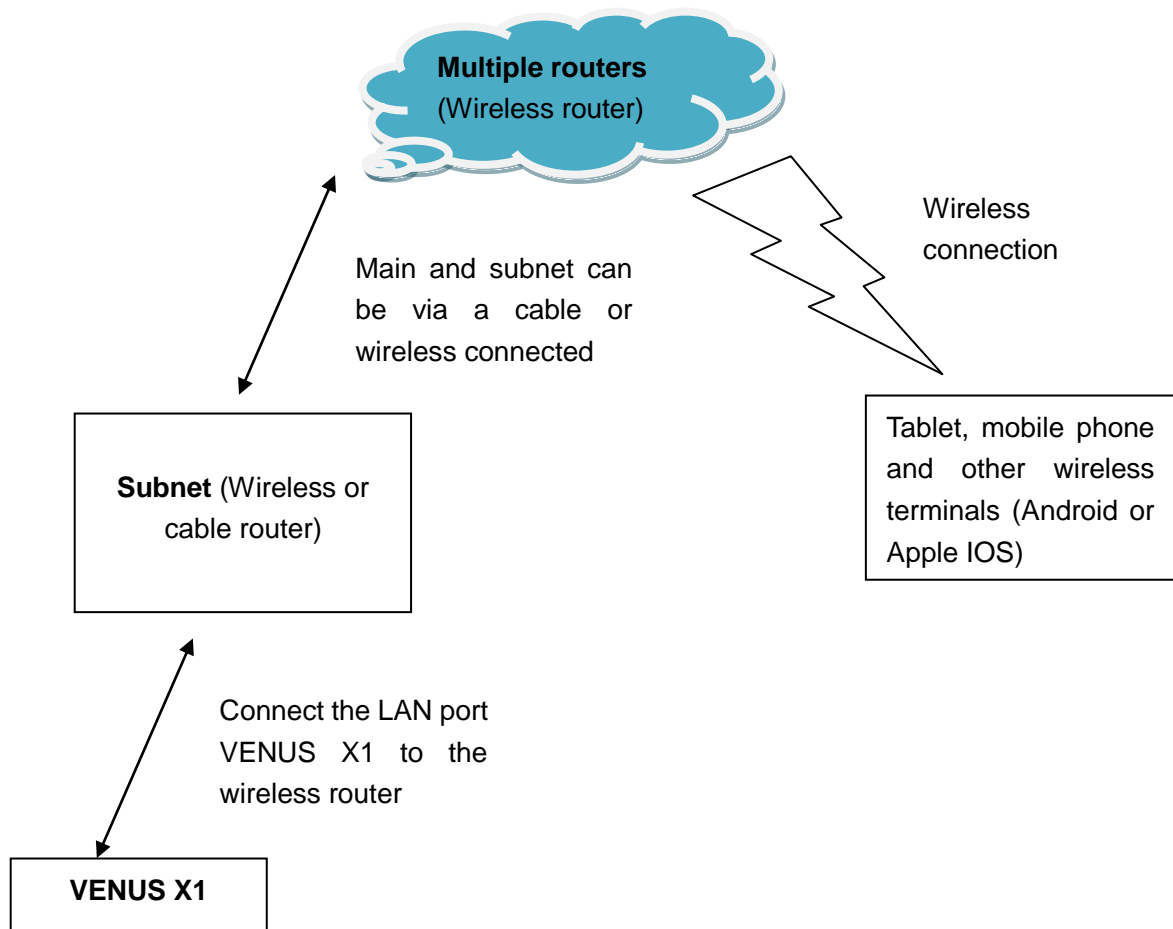

2. Choose the system work mode

(1) The LAN environment of one router

Network topology is shown below:

LAN (Wireless router)

Wireless connect

Connect the LAN port VENUS X1 to the wireless router

VENUS X1

Tablet, mobile phone and other wireless terminals (Android or Apple IOS)

(2) The LAN environment of multiple routers

Multiple routers
(Wireless router)

Main and subnet can be via a cable or wireless connected

Wireless connection

Subnet (Wireless or cable router)

Tablet, mobile phone and other wireless terminals (Android or Apple IOS)

Connect the LAN port VENUS X1 to the wireless router

VENUS X1

(3) System Setting

Push the [MENU] button, and enter to the menu items, turn the knob and choose <SYSTEM>.

```
->SYSTEM                          >>
  LANGUAGE/语言                    ENG
  FACTORY RESET                   >>
```

Push the knob to confirm, turn the knob, and choose <ETHERNET>:

```
->ETHERNET                        >>
  LOCK FRONT PANEL                >>
  LICENCE SETUP                   >>
  HOT BACKUP                      >>
```

Push the knob to confirm, turn the knob, and choose <NETWORK> and set "ON".

```
->NETWORK                    ON
  DHCP                       >>
  IP ADDRESS                 >>
  SUBNET MASK                >>
```

(4) Ethernet setting

When choose "ON", it will show IP address, subnet mask and gateway.

```
->NETWORK                    ON
  DHCP                       >>
  IP ADDRESS                 >>
  SUBNET MASK                >>
```

```
->GATEWAY                    >>


```

① One LAN environment

Set the <IP ADDRESS>, be sure set the same IP address for VENUS X1 and router.

System default the IP address is 192.168.0.100.

```
  IP ADDRESS
->192.168.000.100

```

② Multiple routers

Be sure the router that connect to VENUS X1 is connected to the other routers.

Set the <IP ADDRESS> and <SUBNET MASK>, check the IP address of the wireless router, and make sure it is same with the other four IP address that it connect.

The VENUS X1 will automatically save all the network parameters, it will not be cleared even factory reset.

3. APP connection

(1) Download and install the APP

VENUS X1 APP supports IOS and Android system.

IOS: Open the APP STORE and search "VENUS X1" or "RGBlink", choose "VENUS X1" and download it.

Android: Open the official Android market and search "VENUS X1" or "RGBlink", choose "VENUS X1" and download it.

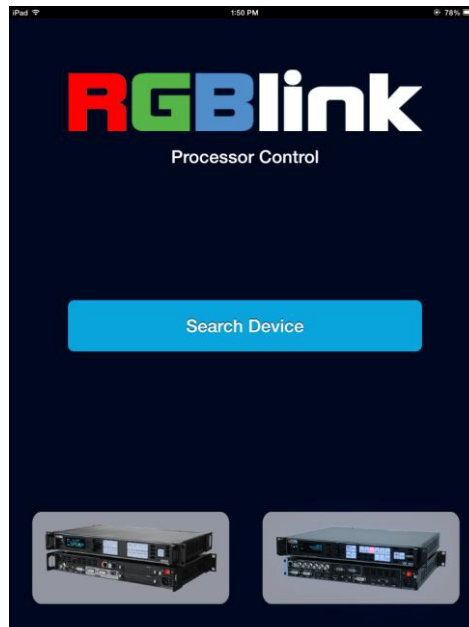After download, it will show the shortcut icon .

(2) Open the APP for operation (Take IOS for example, and same with Android)

Make sure the mobile terminal equipped with APP is connected to the LAN wireless router.

Open the APP "VENUS X1" and click "Search Device", choose "VENUS X1".

Open APP   Search Device

Connect the Device
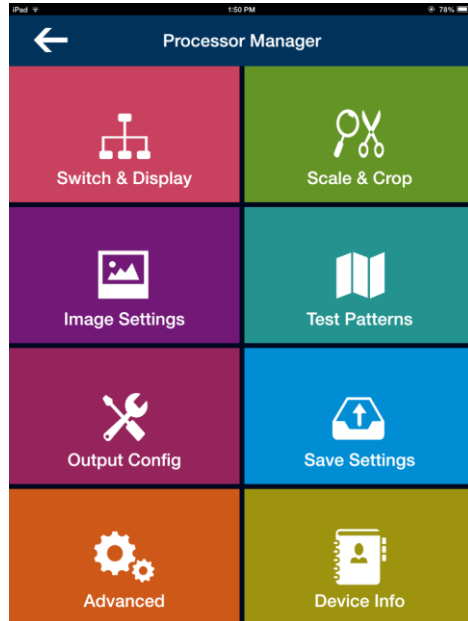
Operate the Device

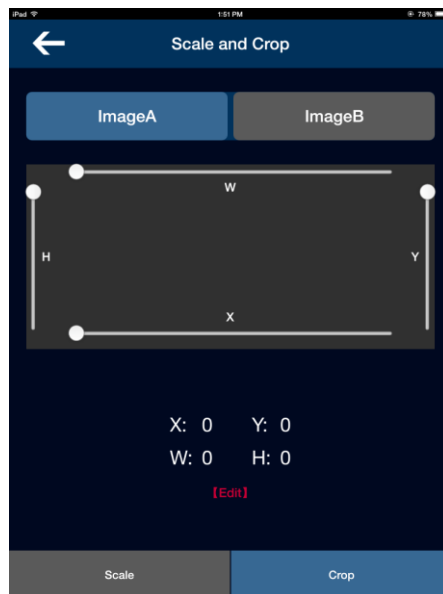**(3) APP functions**

① **Switch & Display**

Single Image

PIP Mode

② **Scale & Crop**

Scale and crop setting. Including Image A and Image B. Drag the scroll bar in activity area to adjust the width, height, X and Y.
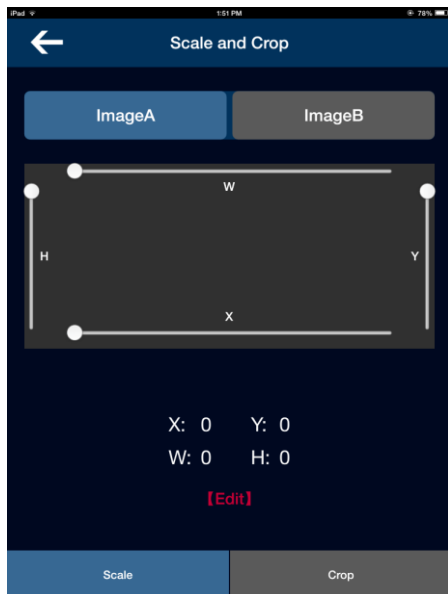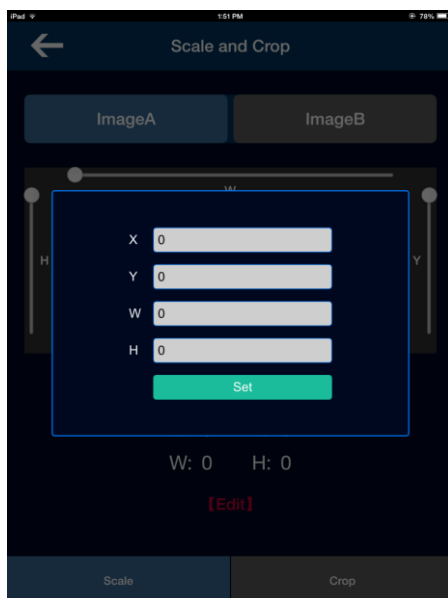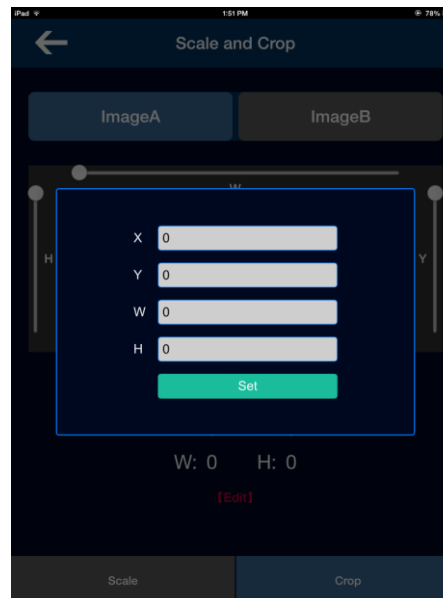
Scale	Crop

User can also click "Edit" and precise adjust the width, height, X and Y in the pop-up window.

Scale	Crop

③ **Image Settings**

Brightness, contrast and color temp setting. Drag the scroll bar in activity area to adjust the R, G, B. If click "SYN", the R, G, B will be adjusted synchronously. "Reset" will factory reset all the parameters.

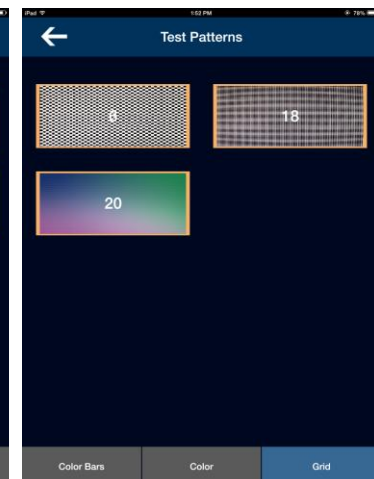| Brightness | Contrast | Color Temp |

④ **Test Patterns**

Including color bars, color and grid, and include all the common test patterns.
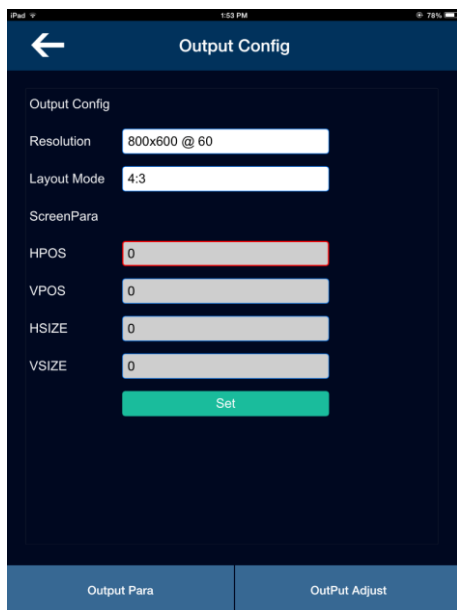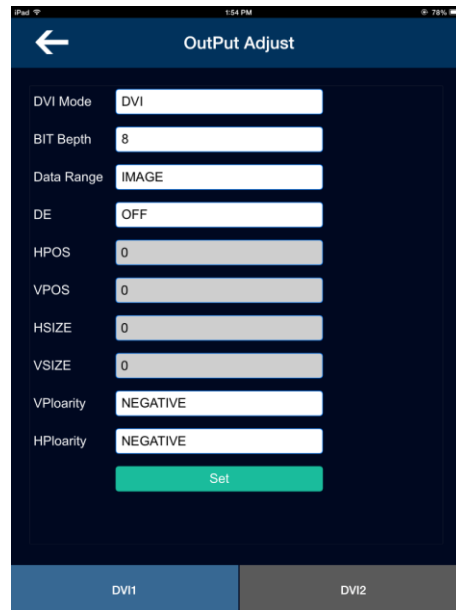

| Color Bars | Color | Grid |

⑤ **Output Config**

Including output config and output adjust. In output config, user can set the resolution, layout mode and screen para. And in output adjust, user can set DVI mode, bit depth, data range, DE, etc.
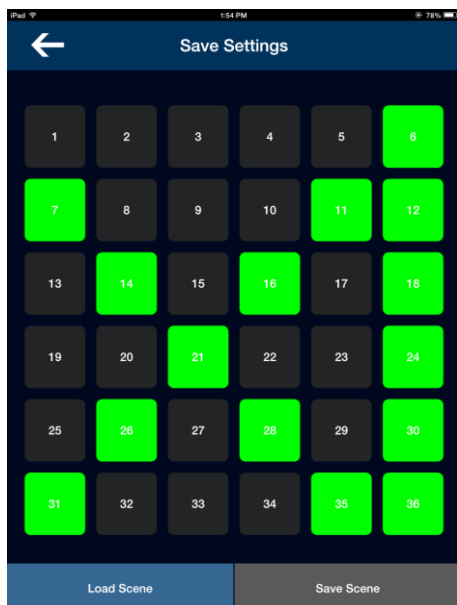
| Output Config | Output Adjust |

⑥ **Save Settings**

Load scene is load the saved scenes. Save scene is save the adjusted parameters.

VENUS X1 supports 36 groups of "Load Scene" and "Save Scene".

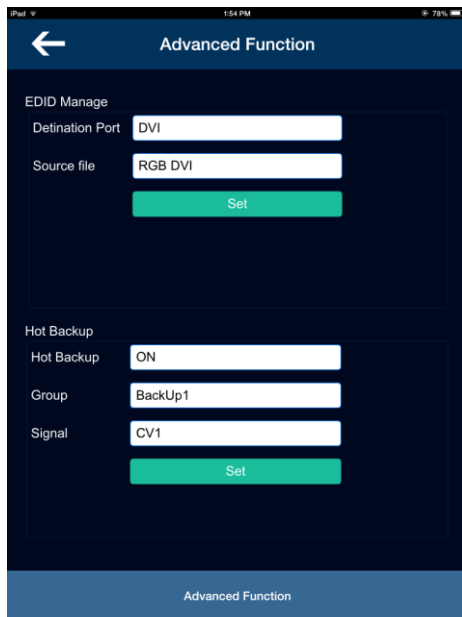| Load scene | Save Scene |

⑦ **Advanced**

Advanced function includes EDID manage and hot backup. In EDID manage, choose the

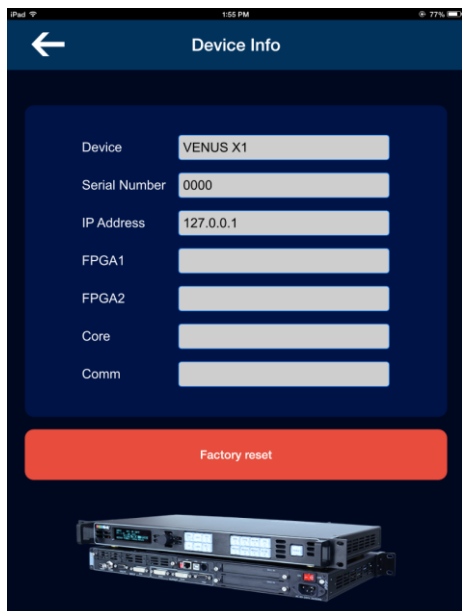destination port and source file. VENUX X1 supports DVI, HDMI and VGA EDID manage.

Hot backup includes 5 groups of backup inputs.

Advanced Function

⑧ **Device Info**

The device info includes device name, serial number, IP address, FPGA1, FPGA2, Core and Comm. If image quality distorts by improper operation, it can be recover by "Factory Reset".

Factory Reset